

Deramus
Sizes Up Katy Situation—p. 9

Where to Get Your Money Back Fast . . . p. 26

RAILWAY AGE

APRIL 29, 1957 • THE INDUSTRY'S NEWSWEEKLY



Men Who Build the Future of American Railroads

"Having spent most of my railroad career as a traffic man I know that 'good enough' won't do in today's competitive market. Continuous improvement of services is necessary to realize the enormous opportunities for growth of railroad traffic and earnings in the decade ahead.

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HOWARD E. SIMPSON, President, Baltimore & Ohio

Electro-Motive shares Mr. Simpson's enthusiasm for the railroads' future. Certainly, one of the ways to improve service is to utilize modern equipment. Testimony to B & O progress in freight and passenger service are the 1,032 Diesel units aggregating over 1,400,000 horsepower now in active service.

ELECTRO-MOTIVE DIVISION • GENERAL MOTORS
LAGRANGE, ILLINOIS • Home of the Diesel Locomotive
In Canada: General Motors Diesel Ltd., London, Ontario

HOW BELL SYSTEM COMMUNICATIONS SERVE THE RAILROADS



A Maine Central diesel at Lewiston, Maine. Almost 40% of the railroad's freight traffic is provided by the pulp and paper industry.



The Portland dispatcher controls train traffic by Bell System private line telephone. His daily round-up calls inform all way points of train movement scheduled for the next 24 hours.

Private line telephone service makes one-track dispatching a one-man job

All operations on the Maine Central Railroad's two routes between Portland and Bangor are governed by a dispatcher in Portland. His equipment: a telephone headset and dial, and Bell System private line telephone service.

Speaking to any one or any combination of the 22 line stations, he issues all proceed, meet and running orders. He also authorizes delays and speed-ups,

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Bell System service can simplify your own communications. A representative will gladly discuss your operation. Just call your Bell Telephone Company business office.

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Here is dependable insurance against wheel-climbing, flange-cutting, and derailments in switching operations. It's the Bethlehem Switch Point Guard Rail, Model 755.

This new accessory is simply a 4-ft-9-in. length of heat-treated tee rail, chamfered at the ends and ruggedly braced at the sides. And what a job of protection it does!

Notice that the head of the guard stands higher than the stock-rail head. This extra height permits Model 755 to give wheels a gentle shove away from the point of the switch, and effectually prevents "picking" and cutting of this expensive switch component. Trucks thus roll smoothly through the switch, and troublesome derailments are avoided.

Husky side braces are heavily welded to the special tie-plates and hold the guard rail stubbornly in its proper vertical position. The entire guard-rail assembly is firmly bolted down to the plates, but no bolts are needed through the running rail. The Model 755 Switch Point Guard Rail is equally at home on the right- or left-hand side of the switch without change or adjustment.

The best way to appreciate the value of this recent Bethlehem development is to see it in action. This can easily be arranged by telephone or letter to our nearest district sales office.

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The "cushioned coupling" you get with UNION'S new VELAC* automatic control assures reduced impact damage. This equipment determines car weight, rollability and track fullness. Then, taking into account the route resistance, an electronic computer calculates proper release speed, and car retarder pressures are regulated automatically so that cars will couple at just the right speed.

The UNION fully automatic system, including a programmed switching system, permits classification of an entire train with the push of a single button. Some railroads have found they can classify cars in approximately half the time compared to older non-automatic methods. Let us send you complete information on UNION Automatic Classification Yard Systems.

*Trademark

Quality First... TO LAST



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DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

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UNION Car Retarder Installations with Automatic or Semi-Automatic Features

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Eastward Conway Yard, Conway, Pa.

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Hills Park Yard, Atlanta, Ga.



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April 29, 1957

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CONTENTS and Week at a Glance

Katy looks for 'sound footing' p. 9

Everything W. N. Deramus III has done since becoming president of the Missouri-Kansas-Texas has been for the good of the railroad, he told a Railway Age reporter. He emphasizes that his only objective is to "get the railroad back on its feet."

Passengers can be profitable, says Budd p.11

The Budd Company's president told last week's meeting of the Passenger Traffic Officers that a basic step toward that goal would be to "revolutionize" selling techniques. "Let's make people *want* to travel by train."

Property investment pays off big p.26

Another deep-digging series by Railway Age editors is off the mark fast with this report on how to make money by spending it. Read why fixed property projects promise savings of 150% and more.

How FM power paces new 'Talgo' p.28

Couple low-slung ACF cars to two 1,750 hp Fairbanks-Morse locomotives and you get quick pick-up and speed potential of 115 mph. New Haven's new train is much like Rock Island's "Jet Rocket" but there are 5 three-unit cars on the "John Quincy Adams."

How to adapt CTC to your traffic p.31

Big opportunities for CTC growth are on low and medium traffic density trackage. Within the next 10 years 35,000 miles of single track can be equipped profitably.

Are we making any money today? p.34

The accent is on "today" on the North Western where top management couldn't wait till next month for last month's accounting reports. Here's how they gave the bookkeeping job back to the bookkeepers.

inspection

of renovated packing

means protection

from high maintenance costs



Short ends, fly, lint, snarls, and knots in renovated packing are specifically outlawed by the specifications of the Association of American Railroads. However, some railroad inspectors, after checking into the situation, rejected 50% more renovated packing than was previously discarded. This proves that below-standard renovated packing is still being used.

The condition is being corrected by railroads which have instituted inspection during the renovating process—the only sure way of detecting sub-standard material.

You can substantially reduce your operating costs by improving the quality of your renovated packing.



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Southland Manufacturing Co., Inc., Norfolk, Va.

Twin City Textile Mills Waste Co., St. Paul, Minn.

RAILWAY AGE The Industry's Newsweekly

Current Statistics

Operating revenues, two months	
1957	\$1,671,027,680
1956	1,646,576,830
Operating expenses, two months	
1957	\$1,331,918,282
1956	1,303,060,291
Taxes, two months	
1957	\$171,149,268
1956	169,385,229
Net railway operating income, two months	
1957	\$124,000,444
1956	129,924,058
Net income estimated, two months	
1957	\$91,000,000
1956	95,000,000
Average price 20 railroad stocks	
April 23, 1957	9,945,531
April 24, 1956	10,407,634
Carloadings revenue freight	
Fifteen weeks, 1957	91.22
Fifteen weeks, 1956	108.36
Average daily freight car surplus	
Wk. ended Apr. 20, 1957	8,494
Wk. ended Apr. 21, 1956	4,874
Average daily freight car shortage	
Wk. ended Apr. 20, 1957	1,234
Wk. ended Apr. 21, 1956	5,755
Freight cars on order	
March 1, 1957	111,965
March 1, 1956	141,437
Freight cars delivered	
Two months, 1957	15,477
Two months, 1956	9,080
Average number railroad employees	
Mid-March 1957	987,975
Mid-March 1956	1,041,214

ADVERTISING SALES DEPARTMENT

Duane C. Salisbury, vice-president, director of sales

New York 7, N.Y., 30 Church st., WO-4-3060
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Lakeside 2322, Joseph Sanders

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GA-1-7004, Lewis Vogler

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Week at a Glance CONTINUED

The Action Page—Building more job security p.50

Developments on the Katy point up the need for labor economies but payroll cuts are tough to explain. Mechanization will actually mean more dependable employment in the long run but "making work" eventually destroys jobs.

SHORT AND SIGNIFICANT

National Transportation Week . . .

will be observed May 12-18. As of mid-April, 147 traffic and transportation clubs throughout the country had planned activities on a local basis in support of the observance, which is sponsored by the Associated Traffic Clubs of America.

Transportation advertisers . . .

spent \$39,511,000 for national newspaper advertising last year, an increase of \$4,701,000, or 10.3%, above 1955. Railroads spent \$7,761,000, a 2.7% increase over the preceding year. Airlines spent \$21,613,000, or 15.2% more than in 1955, and were the largest spenders in the field.

Strike continued . . .

on Duluth, Winnipeg & Pacific, Canadian National subsidiary, last week. No trains moved. Company officials expected resumption of settlement talks early in the week.

More than \$19 billion . . .

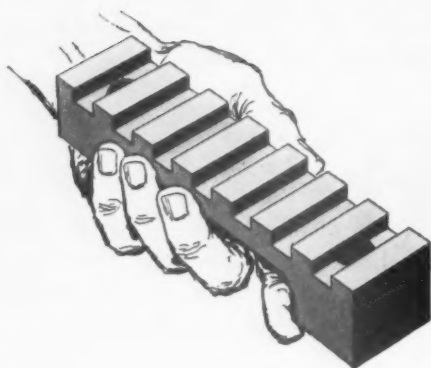
was the 1956 gross revenue of eight carrier groups reporting to the ICC. That's the estimate of the commission's Bureau of Transport Economics and Statistics. Nearly 60% of the total, or \$11.3 billion, went to the railroads and their affiliates, the Railway Express Agency and Pullman Company. Truckers got \$5.9 billion while totals for other groups ranged from \$742 million for pipe lines to \$45 million for electric railways.

Wage rate—\$2.20 per hour . . .

was the average (straight time) for all railroad employees in January. The precise figure was \$2.196. The January rate for all employees except "officials and staff" was \$2.153 per hour. Like averages for January 1956 were \$2.104 and \$2.066, respectively.

How R-S JOURNAL STOPS will further Reduce Solid Bearing Operating Costs

and pay for themselves in less than 3 years!



Tests have proved that this new device will greatly improve bearing performance and journal lubrication, will at least double bearing life, reduce wheel flange wear and make other significant savings in freight car operation.

STABILIZE the solid bearing assembly and you approach the maximum in bearing performance. You do just that with R-S Journal Stops. Best of all, they pay for themselves in less than 3 years. Here's how:

First, you reduce routine yard servicing and oiling requirements. Packing seldom needs adjustment, and you don't need oil so often either. (Other lubricators, pad or mechanical, will benefit, too). You cut car oilers' time in half, and inspectors' time by as much as 25%. When enough cars are Journal Stop equipped that could mean savings close to \$18.00 per car per year.*

Second, all indications point to 3-year periods between periodic attention as required by Rule 66. That would cut current costs in half — save as much as \$6.00 per car per year.

Third, and conservatively, you'll reduce road repair costs to a third of what they now are — possibly a great

deal more. That means minimum savings of \$6.00 per car per year.

Fourth, you'll cut bearing consumption in half — use less than 1½ bearings per car per year. In annual savings that will mean about \$4.00 per car.

The above four items alone represent potential annual savings of \$34.00 per car. Add to these the tremendous savings due to reduced wheel flange wear and a 3-year recovery estimate is probably conservative.

One private car company whose total savings are determined largely by billings that don't cover servicing costs, has already estimated recovery of total installation costs in less than 3 years. Operating roads will save even more. Write us today for full information. Magnus Metal Corporation, 111 Broadway, New York 6; or 80 E. Jackson Blvd., Chicago 4.

*These and other estimated savings are based on unbiased studies of AAR solid journal bearing operating costs.



Unretouched photo of the RS Journal Stop installation with conventional waste packing. Other lubricators are similarly "contained."

MAGNUS Solid Bearings

MAGNUS METAL CORPORATION

Subsidiary of NATIONAL LEAD COMPANY



Katy Looks for 'Sound Footing'

President Deramus tells Railway Age his only objective is to 'get the railroad back on its feet'; future business, he believes, will come from accelerated program of traffic solicitation, backed by good service and proper handling

Missouri-Kansas-Texas President William Neal Deramus III has only one objective—"to get this railroad back on a sound economic footing as soon as possible."

The methods he's been using to secure that footing have come in for a lot of criticism, especially in Kansas and Missouri. Among them, he abolished the road's accounting office in Parsons, Kan. (and met with injunction proceedings by the state prohibiting him from removing the Katy's records from the office), and then he moved to consolidate forces at Dallas, Tex., and Denison. This process created an uproar in St. Louis when he shifted records and personnel from that city (Railway Age, Apr. 1, p. 15, and Mar. 25, p. 14).

All these moves followed his first act after becoming president of the Katy: A system-wide inspection tour designed to help him get firsthand information about the road's operations and its physical properties. Everything he has done since then, he said, is based on what he saw and learned during that trip.

The Katy, Mr. Deramus says, has suffered "three severe blows" in the past few years: (1) "Shortly after World War II we lost the war industry traffic out of Parsons; (2) we have been hard hit by the drought in Texas and other territory we serve; and (3), the third blow the road suffered has been my appearance on the scene."

Seated in an office somewhere along the Katy line, with his hat characteristically on his head, Mr. Deramus, when interviewed by a Railway Age reporter, seemed to be bearing up well under the criticism which greeted his initial moves after becoming president of the railroad.

What he has done, he said, "was urgently needed to save money and render our operation more efficient. It could not have been delayed if losses were to be stopped."

Shortly after Mr. Deramus made his inspection trip of the road's properties he discontinued the Katy's

monthly magazine and, simultaneously, the public relations department. His idea, he said, was to cut all "frill" expenses.

Then the order went out to department heads: "Cut all personnel to the lowest possible number that will still permit daily conduct of business." With this went the order to "do away with all surplus records, cut down red tape and paper work." He says he has an axiom on which he operates: "As little paper work as possible, a minimum of letters, and no statements unless absolutely necessary."

Each of these steps, whether it was designed to cut overhead in personnel or office procedure, was taken with only one motive in mind, he says—"get the Katy back on its feet."

Mr. Deramus attends personally to problems. He gets daily telephoned reports from his department heads. For example, during this interview his daily report came over the wire from his chief operating officer. His questions showed his personal interest. "Why did No. 74 miss its connection?" Then, "Why was No. 71 late?"



MR. DERAMUS took off his hat during the interview only long enough for this photograph to be taken.

And "Are you 'mainlining' held cars or 'yarding' them?" Little seemed to escape his attention.

But attending closely to small items does not detract from his time for big jobs on the Katy. Number One among his immediate goals is a huge tie-replacement program. The system right now, according to his thinking, needs at least 3 million new ties, in comparison with an annual "accepted" tie-replacement program on the M-K-T of approximately 360,000. Running concurrently with this program is one to renovate the power situation on the Katy. Right now four power units are at the LaGrange, Ill., shops of General Motors for major repairs, while eight units are undergoing complete overhauling at Parsons.

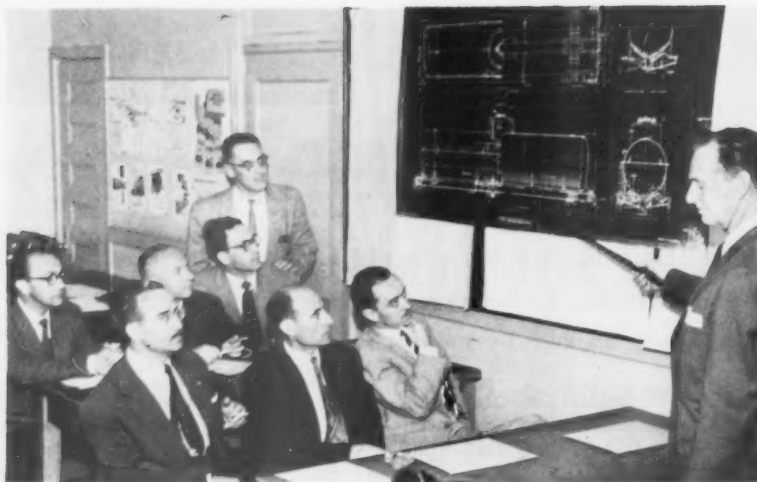
In addition to these man-sized jobs, Mr. Deramus soon will issue orders to start a rail-replacement program. He is not certain just how big an undertaking this will be, but he is sure that "at least 250 miles of trackage must be replaced, and will be, as soon as finances permit."

He is satisfied that the Katy's car inventory is in "acceptable shape" and needs no action at this time.

Future business, according to the new Katy president, will come through an accelerated program of traffic solicitation, which will be backed by good service and proper handling. Any rumors of falling tonnage, over and above the average amount in the territory served by the railroad, are "absolutely false," and emphatically so, in Mr. Deramus's mind.

He seems to have no fear but that all traffic due the Katy will come to it as the result of a well-planned and executed sales program. To heighten the future of freight traffic, it is apparent that he will, soon, stress industrial development efforts. This is one department that, up to the present, has not been affected by the personnel-reduction move. His interest in this type of traffic-growth approach is evident from his conversation.

Mr. Deramus sincerely feels that



SP Briefs Visitors on Oil Transport Damage Control

Touring petroleum industry and military officials from Spain get first-hand instruction in loss and damage prevention from F. G. Reed, Southern Pacific freight loading and container

engineer. Spanish visitors are participating in quality control program sponsored by U.S. Navy. Mr. Reed explained precautions necessary for shipment of oil products.

everything he has done so far is for the good of the Katy. He feels sorry for communities like Parsons, and other cities that have suffered by his decisions. His thoughts on economy are tempered by a desire to "extend all efforts possible to aid these communities by luring industries and by attempting to find positions for those who have suffered loss of employment."

Some of these efforts may include renovation of the Katy's Denison and Waco, Tex., yards, plus the one at Parsons. Mr. Deramus is now mulling over a figure of around \$10 million for improvements at Denison alone.

As for the road's capital structure,

a plan is being considered to "help us get out of our present predicament." The plan has been offered to the stockholders and filed under Section 20-b of the Interstate Commerce Act. Under this recapitalization plan, preferred stockholders would receive for each share of preferred stock and accumulated dividends: (1) A 5½% \$100 income debenture dated January 1, 1957, maturing in 2032; (2) a \$100 certificate dated January 1, 1957, constituting a charge to income; and (3) one share of common stock.

Other moves to improve the railroad are on the planning board, although he does not want to discuss them at this time, the Katy president says.

Teamster Strike Hits REA in 8 Cities

Railway Express facilities in eight key cities coast to coast were tied up last week following walkouts by employees belonging to the International Brotherhood of Teamsters.

Embargoes were announced on traffic to and from Chicago, Cincinnati, Cleveland, Newark, Philadelphia, St. Louis and San Francisco on April 22 and were extended to New York City on April 24 when the strike spread to that point.

Two New York locals walked out unexpectedly after what REA officials said they thought was a recess in negotiations for a separate contract covering approximately 1,700 em-

ployees in the New York area. The company petitioned the National Mediation Board to intervene in this phase of the teamster dispute.

The walkout in the seven other cities came after the union rejected a wage settlement proposed by a Presidential Emergency Board and accepted by the REA.

A. L. Hammell, REA president, said the rejected settlement proposals are substantially the same as those previously accepted by REA employees represented by other unions.

The proposed settlement called for a three-year contract pro-rating an overall 29-cent raise partially retroac-

tive to 1956, plus fringe benefits, a cost-of-living escalator clause and a company-expense dues check-off.

An REA spokesman said this offer is similar to that made to the New York teamster leaders in negotiations April 23. Teamster bargaining agents were reported asking for a 52-cent wage hike.

Kiley Says Automation Is Best Hope for Railroads

Only automation, "or some solution lying in that general direction," can save railroads from "the squeeze between mounting costs and vigorous competition," J. P. Kiley, president of the Milwaukee, contends.

Speaking in Chicago last week to the railroad division of the American Society of Mechanical Engineers, Mr. Kiley stressed the need for electronic and mechanical controls, "despite the sentimental misgivings which invariably attend any radical departure from long-established practice."

Improvements tending toward automation have substantially bettered the operating performance of the Milwaukee during the past 10 years, he said. Gross tons per train hour have increased 63%, and average freight train speeds are up nearly 20%.

"But the best index is the improved transportation ratio, [achieved] in spite of a rise of 130% in wages and 80% in the cost of supplies," Mr. Kiley said. "The rise in productivity due to improvements was enough to enable us to share our costs of doing business, despite the tremendous upward pressure of costs."

Emphasizing the "make-do" attitude of the Milwaukee, Mr. Kiley also discussed his company's conversion of steam locomotive tenders into snow plows and terminal cabooses. He also discussed the problem of recruiting young engineering talent for the railroads, calling this "an obligation not only to ourselves but to the whole business and industrial community."

NP Hospitals Receive 'First' Ford RR Grant

Northern Pacific Beneficial Association Hospitals, Inc., has received a grant of \$152,400 from the Ford Foundation. An association spokesman says this is the first Ford grant to hospitals primarily serving railroad employees.

The Ford money is designated for use in improving facilities for patients' care. Association hospitals are at St. Paul, Minn., Glendive, Mont., and Missoula, and Tacoma, Wash.

Passengers Can Be Profitable, Says Budd

Tells Passenger Traffic Officers' meeting that train travel can be popularized by 'revolutionary' selling techniques

Passenger traffic officers came away from a meeting of their association in Chicago last week with a carbuilder's pep talk ringing in their ears, official military concern over dwindling capacity to chew on, and a hatful of ideas on how to increase passenger traffic.

Edward G. Budd, Jr., president of the Budd Company, verbally sliced the passenger business into four segments and argued that each can be made profitable. It's time, he urged, to begin examining profit possibilities with the same enthusiasm that abandonments have been examined.

"Other industries have struggled for years to attain the position yours now enjoys—gross sales of \$750 million annually," Mr. Budd declared. To him, it would be tragic to "mistreat such great revenue."

The Philadelphia carbuilder divided railway passenger service into four physical areas:

- Very long haul, or "cruise-type" service—such as the 40-hour runs from Chicago to the Pacific Coast. "The secret, of course, is giving the passenger—first class or coach—the most attractive and most comfortable equipment, plus the best service possible. The trip itself becomes a thrilling and enjoyable experience to be long remembered and talked about. This, we believe, is a permanent market."

- Heavily traveled overnight services—such as New York to Chicago. He called these services a potential growth market. They are, as he sees it, dependable, competitive with air travel in conserving business time, and they do away with the need for hotel reservations.

- Shorter-run trips between important metropolitan centers, such as New York to Boston or Washington. "In this area, all the advantages enjoyed by railroads combine to give them overwhelming superiority over air, bus or auto travel. Here trains can compete with planes, insofar as speed is concerned."

- Commuter service in large cities. Good equipment, Mr. Budd declared, can do wonders for this "much discussed and abused source of revenue."

Reporting on the operations of recent Budd-built trains in each of these markets, Mr. Budd revealed that Santa Fe's "Hi-Level El Capitan" boosted passenger-miles by 26% in its first month last summer, producing

added revenue from an already profitable operation.

Burlington's new "Denver Zephyr" garnered more than 2,700 additional passengers in its first two months. The 10,000 persons who used the coach-rate "Slumbercoach" in the first five months paid occupancy charges alone of more than \$70,000.

Baltimore & Ohio's RDC "Speedliners" returned better than 18% of the original investment in four months in Philadelphia-Washington-Pittsburgh service. They increased passenger revenue by more than 20%, and, Mr. Budd said, turned a loss into a profit.

Twice, a Chicago commuter road (the Burlington, though Mr. Budd didn't specify it), found no protest to rate-increase applications, proving that "the customer is willing to pay for quality merchandise," Mr. Budd declared. The Burlington has 50 Budd coaches in service and 10 on order.

How to get these new tools? Adopt a positive attitude first of all, Mr. Budd told the passenger traffic men. "Your management is interested in profits no matter where they come from."

How can the pessimistic atmosphere which surrounds the passenger business be changed? Remove the accounting and regulatory disabilities passenger service carries. "But you won't get public or legislative sympathy unless you do a good job while you are fighting for justice."

"Let's quit complaining," Mr. Budd said. "The passenger isn't interested in your problem—he's much more concerned about his personal comfort. Let's make the customer feel wanted . . . make travel by train as uncomplicated as possible . . . make the best possible use of equipment . . . revolutionize selling techniques by merchandising, promotion and advertising. Let's make people want to travel by train."

Col. Ray J. Cox, director of traffic
(Continued on page 14)



Post Office Inspects NYC's TOFC 'Flexi-Van'

Key features of the New York Central's new piggyback "Flexi-Van" equipment are pointed out to a representative of the Post Office Department. Above, in the usual order, are A. E. Perlman, NYC president; Ormonde A. Kieb, assistant postmaster

general; Robert R. Young, NYC chairman; and Leo L. Mellam, president of the New York Central Transport Company. Mr. Kieb and other post office representatives inspected the equipment (Railway Age, April 8, p. 10), at New York City.



recognize her face?

If you do, it's because you saw her in our national magazine advertisements. She told everyone the way her boss saves time on business trips.

How? He leaves his own car at home, takes a fast train and has a new Powerglide Chevrolet Bel Air or other fine Hertz car waiting at the station.

A new way of traveling? To a lot of people it is. That's why our advertising stresses the advantages of rail-auto travel.

Also—Hertz "Rent it here . . . Leave it there" service now is available nation-wide at no extra charge (on rentals of \$25.00 or more). Your customers can go by train, rent a Hertz car and leave it in another Hertz city, then continue on their way by train. The result? More business for *both* of us! Best of all, once your passengers have tried rail-auto travel, they'll come back for more!

Your ticket agents stand to

gain, too. Hertz offers them 10% commission on the total rental fee of any Hertz car, *just for making the reservation*. And for added convenience, there are Hertz counters and direct "Call a Car" phones in terminals across the country.

So let's work together. Mention the idea of renting a car in *your* advertising. If you would like free promotional materials, write: Hertz Rent A Car, 218 S. Wabash Ave., Chicago 4, Ill.



More people by far...use

HERTZ
Rent a car

MARKET OUTLOOK THIS WEEK

Carloadings Up 1.9% in Week

Loadings of revenue freight in the week ended April 20 totaled 686,950 cars, the Association of American Railroads announced on April 25. This was an increase of 12,986 cars, or 1.9%, compared with the previous week; a decrease of 76,487 cars, or 10.0%, compared with the corresponding week last year; and a decrease of 14,482 cars, or 2.1%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended April 13 totaled 673,964 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, April 13			
District	1957	1956	1955
Eastern	111,663	125,860	119,381
Alleghany	132,653	151,210	133,857
Pocahontas	63,181	61,752	57,636
Southern	123,144	128,829	105,175
Northwestern	81,298	99,363	85,242
Central Western	111,349	117,303	114,035
Southwestern	50,676	57,736	54,978
Total Western Districts	243,323	274,402	254,255
Total All Roads	673,964	742,053	670,304
Commodities:			
Grain and grain products	49,426	50,277	41,284
Livestock	5,490	7,237	7,880
Coal	135,139	137,960	113,031
Coke	12,345	13,042	10,889
Forest Products	40,625	43,047	37,882
Ore	29,477	49,052	32,473
Merchandise l.c.l.	56,791	61,538	60,718
Miscellaneous	344,671	379,900	366,147
April 13	673,964	742,053	670,304
April 6	644,092	685,378	659,217
March 30	694,922	724,968	654,761
March 23	685,833	697,248	634,628
March 16	689,226	685,983	650,924
Cumulative total, 15 weeks	9,945,531	10,407,634	9,646,231

IN CANADA.—Carloadings for the seven-day period ended April 7 totaled 72,673 cars, compared with 92,411 cars for the previous ten-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
April 7, 1957	72,673	33,957
April 7, 1956	76,465	36,016
Cumulative Totals:		
April 7, 1957	984,320	459,856
April 7, 1956	1,041,276	486,138

New Equipment

FREIGHT-TRAIN CARS

► *Chicago & Eastern Illinois.*—Ordered 50 65-ft gondola cars, Bethlehem Steel; cost, about \$500,000; delivery expected first quarter 1958.

► *Northern Pacific.*—Ordered 1,000 50-ton box cars from its Brainerd, Minn., shops; included are 500 50½-ft cars with 15-ft double doors, estimated cost \$4,325,000, for delivery about next March, and 500 40½-ft cars with 6-ft doors, estimated cost \$4,075,000, for delivery about July or August 1958.

► *Union Tank Car Co.*—Ordered 10 10,000-gal. tank cars from its own shops for delivery in fourth quarter of 1957.

LOCOMOTIVES

► *377 New Units Installed in First Three Months.*—Class I railroads installed 377 new locomotive units (373 diesel-electrics, four electrics), in this year's first three months, compared with 399 (all diesel-electrics), in the comparable 1956 period, AAR reports; new locomotive units on order April 1 by Class I railroads totaled 747 (717 diesel-electrics, 30 gas turbine-electrics), compared with 859 (832 diesel-electrics, 15 gas turbine-electrics, 12 electrics), on order April 1, 1956.

► *Pennsylvania.*—Purchased seven retired electric locomotives from the Great Northern; all are of Y-1 class, rated at 3,300 hp.

New Facilities

► *Cincinnati Union Terminal Company.*—Is replacing facilities in its engine terminal area to accommodate diesel locomotives instead of steam; additions, valued at \$150,000, are being made by company forces.

► *Reading.*—Announced plans for construction of about 61 miles of centralized traffic control at cost exceeding \$1,306,000; project, to begin May 1 and be completed in two phases during next 1½ years, will initially cover area between Port Clinton, Pa., and Schuylkill Haven, and between Haucks, Pa., Buck Mountain and Tamaqua Tunnel; phase two will include territory between West Milton, Pa., and Williamsport.

► *Soo Line.*—Company forces will complete yard extension at Stevens Point, Wis., in June at cost of \$250,000; installing lighting in yards at Stevens Point, Minneapolis, Superior, Wis., Glenwood, Minn., and North Fond du Lac, Wis.,—total cost is \$200,000; remodeling blacksmith shop at Fond du Lac terminal, for use as freight car paint shop, at cost of \$75,000; remodeling three stalls of Stevens Point roundhouse for use as freight car paint shop, at cost of \$35,000; installing 250,000-gal. oil storage tanks at Glenwood and Portal, N.D., at total cost of \$70,000.



Pennsy 'Rolls 'em in the Aisles'

Stainless steel and plastic vending wagon is rolled to passenger's seat on Pennsylvania's New York-Philadelphia-Washington trains. Sixteen such carts, designed by Coca-Cola Com-

pany for PRR, are being introduced. Cart, just 16 inches wide, contains vacuum-insulated containers to maintain hot or cold temperatures of foods and beverages.

(Continued from page 11)

for the Military Traffic Management Agency, raised the question of how railroads can retain stand-by capacity for mass military movements and still show a profit on passenger operations. He admitted he doesn't know the answer.

Col. Cox proposed that a joint railroad-military committee explore the problem. The committee will be set up through the railroads' existing inter-territorial military committee.

"Although railroads have the ability to handle mass movement, their

capability of doing so is being decreased every time an old standard sleeper or straight-backed coach is replaced by a type of car that encloses the individual in his own private shell of aluminum and steel," Col. Cox said.

"In time of an all-out emergency, the number of uniformed personnel required to be on the move will increase, possibly far beyond anything we have experienced in past emergencies—and beyond any doubt the bulk will be required to move by rail."

Jenks: Sell Commuter Lines to Public

Public acquisition and operation of suburban rail systems is being urged by Rock Island President Downing B. Jenks.

"What he would really like to do is sell our Chicago suburban lines to the city," a Rock Island spokesman said.

Mr. Jenks presented his case for public ownership in hearings before an Illinois legislative committee studying a possible subsidy for the money-losing Chicago Transit Authority. A good part of the proposed subsidy would be used to extend CTA's rapid transit lines into the suburbs.

Saying his road was losing 1½

million dollars a year on its suburban service, Mr. Jenks argued that a publicly owned "integrated" system could make better use of equipment and could change fares and service without regulation by the Illinois Commerce Commission.

In the same hearings, Mr. Jenks' position was partially supported by President J.H.M. Clinch of the Chicago North Shore & Milwaukee and Professor Stanley Berge of Northwestern University's transportation center.

Mr. Clinch favored subsidization and public ownership of some subur-

ban lines, but said operation of such lines should be by private companies under franchise.

"Short-run" public aid was suggested as necessary by Mr. Berge. "A formula for financing rapid transit and suburban railroad service which seems to embody sound economic policy is to charge passengers fares sufficient to cover all current operating expenses and to confine public investment to right of way, track and other fixed capital improvements." Outright public ownership and operation, however, should be only a "last resort," he said.

More or less firmly disagreeing, at least on the question of the subsidy, were positions taken by Wayne A. Johnston, president of the Illinois Central, Ben W. Heineman, president of the North Western, J. P. Kiley, president of the Milwaukee, and Burlington President Harry C. Murphy.

Mr. Johnston said: "Fundamentally, every unit of our economy ought to justify its existence. In transportation, the fares charged should be kept adequate to maintain the service."

Supreme Court Affirms Alleghany's Carrier Status

The United States Supreme Court has sustained an Interstate Commerce Commission determination that Alleghany Corporation has carrier status and is subject to the Interstate Commerce Act.

The court's ruling gives Alleghany the status it wanted, meanwhile rejecting contentions of protesting Alleghany stockholders who sought to have the holding company placed under the regulatory jurisdiction of the Securities & Exchange Commission. The decision was embodied in a 5-to-3 opinion announced by Justice Frankfurter. A dissenting expression came from Justice Douglas with whom Chief Justice Warren and Justice Black agreed. Justice Whittaker did not participate.

Also involved was an attack on the ICC's approval of an Alleghany issue of preferred stock. As to that, the Supreme Court ordered the lower court, from which the case was appealed, to give consideration to claims that the issue, as approved by the ICC, was in violation of the Interstate Commerce Act. The lower court was a special three-judge court sitting in the United States District Court for the Southern District of New York.

The carrier-status phase involved an attack on a 1955 decision of the ICC. That decision granted a joint application of New York Central and

Alleghany, as Central's controlling stockholder, for authority to merge the properties of the Louisville & Jeffersonville Bridge & Railroad Co. into its parent company, Big Four, of which NYC is lessee.

The commission accepted Alleghany as an applicant and approved the merger transaction. In a like 1945 case, the commission accorded Alleghany carrier status for the period during which it controlled the Chesapeake & Ohio. Alleghany relinquished this C&O control as part of the maneuvering whereby it acquired control of Central.

The Supreme Court's decision held in effect that the Jeffersonville-Big Four merger was a transaction requiring ICC approval as an acquisition of control of a second carrier by Alleghany which already controlled Central. The dissenting opinion protested that Alleghany's control of Central gave it control of the Central-system "package," which includes Jeffersonville. One who has control, as defined in Section 5(3), the dissenters said, "does not acquire it when he merely changes the method or means of its exercise."

Gass Predicts 50,000-Car Increase in Freight Fleet

Chairman A. H. Gass of the Car Service Division, AAR, has interpreted first-quarter installations and retirements as indicating that there will be a 50,000-car increase this year in the freight fleet of Class I railroads.

Mr. Gass made this prediction in his latest review of "The National Transportation Situation." He noted that the Class I roads installed 23,265 new cars in this year's first three months when retirements totaled 10,644 cars. First-quarter installations by car-line affiliates of the Class I roads totaled another 1,185 cars.

March installations by those roads and car lines totaled 9,231 cars, more than in any previous month in nearly 5½ years—since November 1951. Their order backlog as of April 1 totaled 99,054 cars.

The serviceable fleet of Class I roads on April 1 totaled 1,650,084 cars, 23,110 cars more than a year earlier.

Detention reports for March indicated that 20.72% of the cars placed in that month were detained beyond the free time. That compared with 20.05% for the previous month and 19.89% for March 1956.

Performance data showed that freight cars produced an average of 936 net ton-miles per serviceable car per day in January.



REA Opens New Coast-to-Coast Communications System

A new high-speed, two-way communications system linking over 14,000 express offices coast-to-coast through the Western Union network was inaugurated last week by the Railway Express Agency. Pressing the switch at the master control in REA's Chicago offices is A. L. Hammell, REA president. C. T. Baumgart (center), WU superintendent, and J. E. Meyers, WU sales manager, stood by as Mr.

Hammell dispatched the first message, which automatically told all stations that the system was officially in operation. The private-wire system, leased from Western Union, has an hourly capacity of 43,000 words. The installation offers pushbutton selection of any single station, or it can simultaneously transmit messages to any combination of stations, or to all stations, on the circuits.

RR Buyers-Suppliers Swap Gripes

What do railroad suppliers want from their railroad customers?

- Long-range purchasing programs.
- Standardization of equipment.
- Less purchasing on price-basis only.
- More exchange of ideas on future plans.
- Reasonable delivery demands.

And what do railroad purchasing men want from supply salesmen?

- Accuracy and performance in delivery promises.
- More knowledge of products offered—and those of competitors.
- More interest in railroad inventories.
- Better salesman-home office communications.
- Less "my-boss-knows-your-boss" selling.

That summary doesn't touch all the bases but capsulizes the discussion of a panel of three suppliers and three railroad purchasing men who aired some of their complaints at the April 18 New York Railroad Club meeting.

Moderator Charles H. Beard, general traffic manager, Union Carbide & Carbon Company, explained the forum was meant to help railroads and the supply industry establish better working relationships. He emphasized that the panelists were expres-

sing what they had learned are the general feelings on both sides of the supplier-purchaser fence.

Panelists for the railroads were J. S. Fair, Jr., general purchasing agent, Pennsylvania; C. H. McGill, manager, purchases and stores, New Haven; and F. W. Pettit, general purchasing agent, Western Maryland; and, for the supply industry, E. B. Carpenter, vice-president, ACF Industries; A. H. Smith, executive vice-president, Kerite Company; and



Engineer's "guide to better handling"

The Westinghouse Type "B" Brake Pipe Flow Indicator is just a small instrument but it gives the engineer a great deal of information as to what is happening in the brake pipe of his train. Our representatives will be glad to tell you all about it.



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AIR BRAKE DIVISION



WILMERDING, PA.

W. J. Stephens, assistant general sales manager, Bethlehem Steel.

The supplier spokesmen objected to railroad practices which keep salesmen waiting, both for interviews and for "the word" on whether "we're in or out" after bidding. They asked for more understanding of the railway suppliers' problems, noting that, like the railroads, their profit margins are small and their progress—in new designs and more mechanization of manufacture, for example—are hampered by the railroads' own lack of progressive and aggressive attitudes.

Mr. Stephens pointed up the contrast between railroad purchasing and that of other industry. He said shipbuilding, pipeline manufacture and road construction are planned sometimes decades ahead, whereas, with a 10% slump in carloadings, railroad "purchasing procedures get into high gear and steel buying for the quarter at hand is slashed 50% or more."

Mr. Stephens added that railroads, by not standardizing specifications for such products as rail and rolling stock, are forfeiting potential savings offered by new manufacturing technology. He noted that last year Bethlehem Steel built seven orders of 70-ton hopper cars and four of 70-ton gondola cars, all of different design. "Thirty per cent of the working days were lost," he said, "during changeovers from one car to another." Cost of such down-time, he said, is \$1 a second.

The railroad reply to this point was that the purchasing agent only contributes, while standardization policies must be set by top management. To this end, it was brought out, salesmen should maintain contacts with purchasing agents as well as with "using departments" and should keep them informed of manufacturers' plans and policies.

On the subject of reciprocity, Mr. McGill said all railroad purchasing men would welcome the day when personality pressures are eliminated—when they won't be expected to buy products, which salesman and purchaser know are no good, because of side relationships between railroad and supplier.

NYC Gets Permission to Drop Two Illinois Trains

After waiting nearly eight years, the New York Central has received authority from the Illinois Commerce Commission to discontinue two passenger trains. The commission's order permits discontinuance on May 4.

The trains, Nos. 462 and 463, run from Chicago to the Indiana-Illinois



Sweet Stuff!

A gallon of "fancy grade" maple syrup was presented to Donald Gordon (right), chairman and president of the Canadian National, when he recently called on Vermont Governor Joseph B. Johnson. Mr. Gordon was in the state for the annual meeting of the Central Vermont, a wholly owned subsidiary of the CNR.

state line and to Harrisburg, Ill. The road first asked permission to drop them in July 1949.

In March 1953 the NYC renewed its petition before the commission, then agreed to improve service in an effort to attract patronage, if the commission would stay its denial order. In the discontinuance order, the commission pointed out the road had substantially complied with the agreement to improve service.

Trucking Still Twice As Risky as Railroading

The trucking industry's employee injury rate in 1955 was nearly twice that of Class I railroads, including switching and terminal companies.

Injury frequency rates per million man-hours worked were 27.9 and 14.45, respectively. The truckers' rate was down from 30.3 in 1954, when it was about 2¼ times the railroad rate of 13.12.

The rates were reported by the ICC's Bureau of Transport Economics and Statistics in its "Transport Economics."

The railroad figures were based on reports to the commission, while the other data came from the Department of Labor's Bureau of Labor Statistics.

The only transport agency with a better 1955 record than the railroads was the local bus lines with a rate of 10.9. The warehousing and storage industry had a rate of 32.2, while stevedoring's rate was 96.9. Manufacturing industries had an average rate of 12.1.

5¾-Year Reprieve Ended For Truck Trip-Lease Ban

The Interstate Commerce Commission's ban on trip-leasing of motor trucks became effective April 19—nearly 5¾ years after its original effective date of August 1, 1951.

The ban is a rule fixing a minimum lease period of 30 days, but its scope has been restricted by exemption of so-called farm trucks and other exceptions. The commission's other truck-leasing rules became effective February 1 (Railway Age, Dec. 17, 1956, p. 12). The trip-lease ban was stayed by court orders, the last of which expired April 19.

February Accidents

The ICC has made public its Bureau of Transport Economics and Statistics' preliminary summary of railroad accidents for February and this year's first two months. The compilation, shown below, is subject to revision.

No comparison with 1956 was made because of the change in accident reporting rules which became effective the first of this year.

Item	Month of February 1957	2 Months ended with February 1957
Number of train accidents*	322	710
Number of accidents resulting in casualties	40	80
Number of casualties in train, train-service and nontrain accidents:		
Trespassers:		
Killed	55	98
Injured	32	67
Passengers on trains:		
(a) In train accidents*		
Killed	38	41
Injured	1	2
(b) In train-service accidents		
Killed	120	250
Injured	16	37
Employees on duty:		
Killed	1,031	2,321
Injured		
All other nonresponders:**		
Killed	102	242
Injured	403	242
Total—All classes of persons:		
Killed	174	379
Injured	1,624	3,668

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of more than \$750 to railway property in 1957. Only a minor part of the total accidents result in casualties to persons, as noted above.

**Casualties to "Other nonresponders" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nonresponders, were as follows:

Persons:		
Killed	105	243
Injured	342	797

Post Office Seeks Raise In Parcel Post Rates

The postmaster general has asked the Interstate Commerce Commission to consent to establishment of higher (Continued on page 36)

Questions and Answers

Of current interest to the Transportation Department

At the 1956 meeting of the Freight Station Section, Association of American Railroads, it was suggested that loads in piggyback trailers should be looked over by a competent railroad representative before they were placed on the flats. We asked a number of railroads if they inspected the interiors of trailers, as a safety and damage prevention measure. We also asked if any of them were using load dividers in these trailers. Here are their answers.

?

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

No. Load dividers are not used.

For the Pennsylvania, Vice-President J. P. Newell reports: "Trailers of common carriers moved by PRR are given an exterior inspection only. In addition to this visual inspection, rear doors of the trailers are sealed with a heavy binding wire. This is to assure proper protection (against doors opening) while moving over the road on the flat cars."

The situation is a bit different where piggyback freight is carried in the railroad's own trailers, Mr. Newell says. "The all-rail bill of lading load does get an inspection by the railroad, to ascertain if the method of loading meets all requirements."

Mr. Newell states that the PRR has not found it necessary to use load dividers or bulkheads in its own trailers "if the commodity is properly loaded."

From the Chicago & North Western, which piggybacks only its own trailers, E. B. Wilson, superintendent of stations, writes that, like the PRR, his road does not use load dividers. However, states Mr. Wilson, "for trailers ordered lately we have specified a rear bulkhead to prevent loads from shifting and damaging the rear doors."

Regarding load inspection, Mr. Wilson states that: "At all C&NW loading ramp facilities trailers are opened and the load inspected before equipment is loaded on flat cars for movement in trains. We want to make sure that proper blocking and bracing have been used."

The B&O's general superintendent transportation, A. W. Conley, reports that in "closed-van type TOFCEE trailer loads are inspected by our contract trucker before doors are sealed." B&O's car forces inspect loads on flat beds.

The B&O—like the North Western a Plan 2 (only) piggybacker—does not use load dividers.

The Cotton Belt's G. B. Matthews, vice-president and general manager, says his road does not inspect the interior of trailers, once they're loaded.

Nor has that road found it necessary to use load dividers. However, it is using "chain protection around the middle hinge of the rear door." This is to prevent doors from opening all the way, allowing freight to spill out.

From Erie Superintendent of Transportation H. H. Clark I received the following information. "Occasionally we use lumber across the door of the trailer. This is done to protect the door rather than to prevent damage to the freight. In most cases, trailer loads are compact enough that no special blocking is necessary."

When it come to inspection, "closed trailers usually are sealed when delivered to the railroad. Whenever possible, the drivers check lading for safety or proper loading, but no special inspection is made when trailer is ready to be placed on cars. Open top trailers are inspected by our mechanical people when they reach our loading yards.

"The practice relative to inspecting piggyback trailers is no different from that followed when we receive a regular carload shipment in closed cars. Carloads are inspected under shipper's load and count and no special inspections are made in these cases. Of course, all open top loading, as in piggyback, is subject to inspection by our car department forces, both at point of origin and at intermediate terminals during transit.

"If difficulties arise in connection with the loading method in closed equipment, then arrangements are made to inspect loads at time of loading by the shipper."

Five roads—and none of them uses dividers. Yet I hear that some truck lines are beginning to put such devices into some of their trailers. Since the truckers' claim ratio is about the same as the railroads', my guess is that they need them. It must be, then, that the combination of car and trailer springs, etc., really is effective in reducing shocks transmitted to the lading.—G.C.R.

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...Box Car Doors of REYNOLDS ALUMINUM

Chesapeake and Ohio recently ordered from the Youngstown Steel Door Company 100 carsets of box car doors with bottom panels fabricated of Reynolds Aluminum. Because aluminum will not rust, and resists corrosion from industrial fumes and chemicals, this aluminum panel will last far longer—perform better—require less maintenance . . . assure long range economy. And, with just the lower one-third of each door made of aluminum, total door weight is reduced 108 pounds, without sacrificing strength.

For box car doors that are wider (yet weigh less), for doors that are easily opened, won't

stick on their tracks and can't rust—consider aluminum. Remember—it is easy to fabricate, costs less to ship, handle, install—and reduces dead weight hauling in mile after mile of service.

And for savings on car roofs, floor racks, bulkheads, cross-members, crossbucks, operating signs, signal cable—also consider aluminum. Reynolds Aluminum Specialists will assist you and railroad equipment suppliers in planning long range economy, *today*. For details, call your nearby Reynolds Office or write *Reynolds Metals Company, P.O. Box 1800-TM, Louisville 1, Ky.*

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That's because test after test in the laboratory proves that Extended Life Springs outlast ordinary springs an average of ten to one. The test results are so conclusive that it is not a question whether they will last longer under your cars, but only how many *times* longer. Here's a way to find out: Specify new ASF Extended Life Springs where types of service or runs result in bad-order cars due to spring failure. You'll soon find that you get premium service—at no premium in price!



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Only ALCO makes this guarantee: If any ALCO freight-car truck spring purchased from now on, breaks within ten years of the date of manufacture, a new spring will be furnished by ALCO free of charge. This guarantee is prompted by the record of ALCO springs in service, and by the modern, automated ALCO facilities that assure uniform spring quality. Only with ALCO *guaranteed* springs can you be so confident of spring performance and service.

The next time you buy freight-car truck springs, specify ALCO *guaranteed* springs. The guarantee is your assurance of top quality and service in springs made by one of the nation's largest railroad suppliers. For more information about ALCO *guaranteed* springs, contact your ALCO representative.

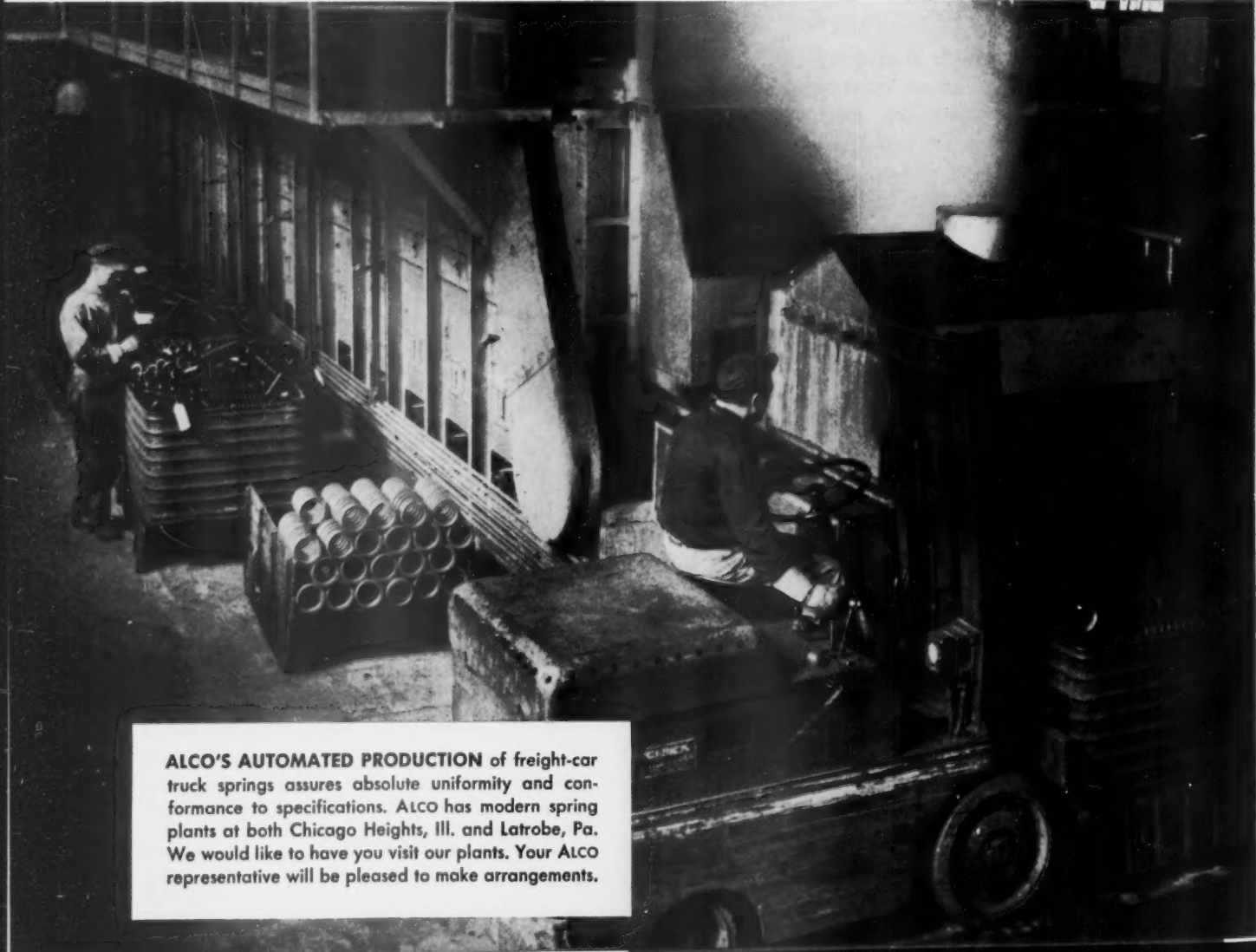
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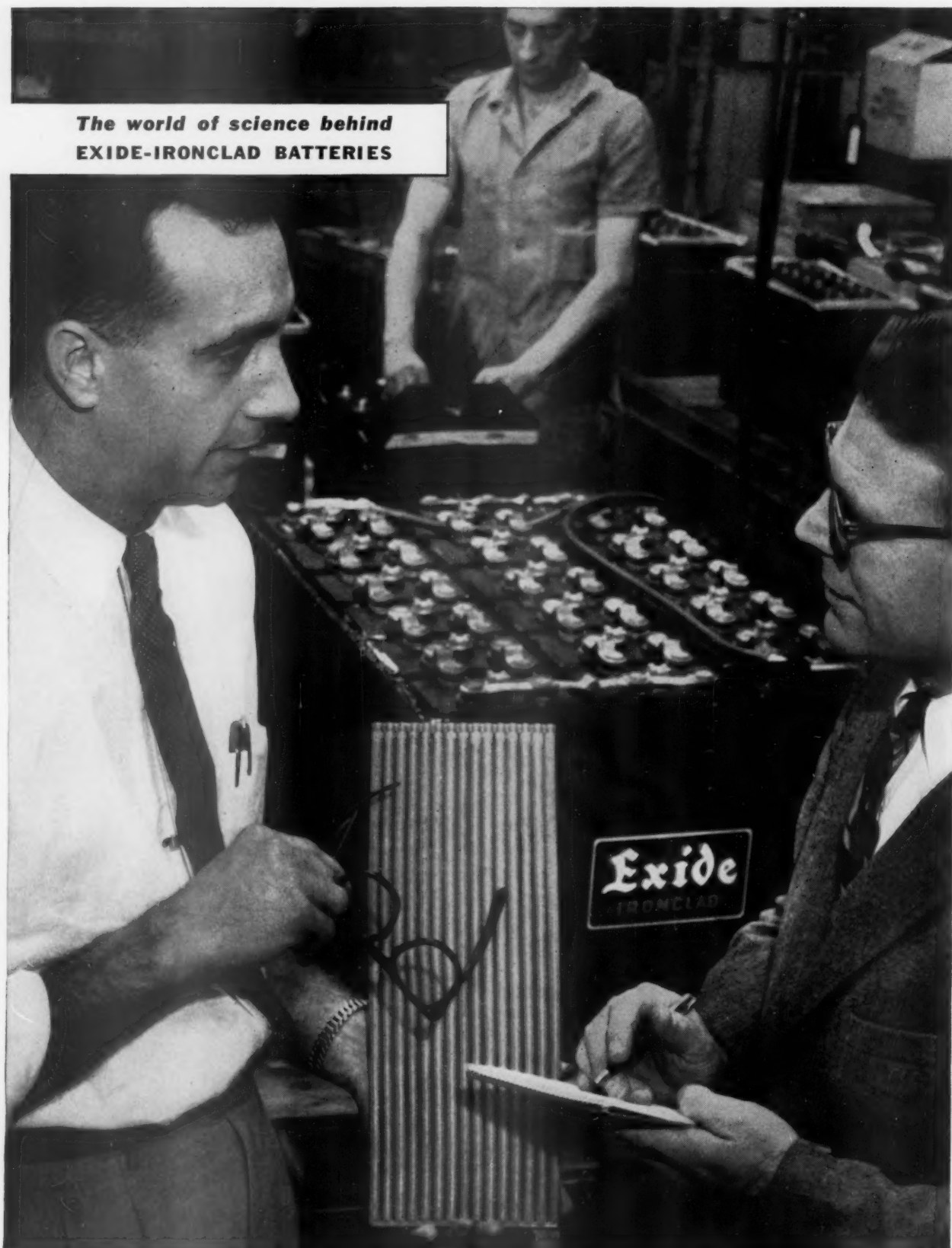


FREIGHT-CAR TRUCK SPRING has ALCO date of manufacture stamped on coil. If it breaks within a period of ten years from that date, a new spring will be furnished free of charge by ALCO.



Being interviewed is H. A. Fuggiti, Acting Senior Development Engineer

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EXIDE-IRONCLAD BATTERIES**



"Here's where the heavy slugs of power come from"

At the Exide Laboratories—

Reporter: Just exactly what part of the battery is that, Mr. Fuggiti?



Fuggiti: This is the Exide-Ironclad positive plate. And in any battery, power reserve is governed by positive plate area.

Reporter: Then do you mean that Exide-Ironclad Batteries have *more* positive plate area?

Fuggiti: Exactly. You can see that here. The cylindrical power tubes are arranged in a row. So the semicircular sides give an effective plate area one-third more than the plate size.

Reporter: How does that increase power reserve?

Fuggiti: Because there's a bigger working surface

of battery plate exposed to the electrolyte. Power response is faster.

Reporter: What does this mean in battery performance?

Fuggiti: It means the battery can provide power to spare for peak power loads as well as a dependable source for continuous loads.

Reporter: Obviously this is an important feature of the Exide-Ironclad Batteries.

Fuggiti: Yes it is, but it's just one of many engineering details that contribute to their long life and high capacity.

Note to battery users: Whenever you order heavy duty batteries or the equipment that requires them, be sure to specify Exide-Ironclad. For detailed bulletin, write Exide Industrial Division, The Electric Storage Battery Co., Philadelphia 2, Pa.



Exide®

THE ELECTRIC STORAGE BATTERY COMPANY

Property Investments Pay Off Big

Technological advances in recent years, applied as improvements to fixed properties, can produce returns as high as 150% and more a year. Here's a rundown on such projects, and how railroads decide which one to do first.

A chief engineer, thumbing through his road's multi-page property improvement budget for this year's current quarter, made this observation:

"We can't, of course, get all the money we would like to have, but it isn't a question any more of being able to afford improvement projects involving the fixed properties. The fact is, we can't afford *not* to take advantage of the opportunities we have today for doing improvement work that will help reduce costs. The savings are that attractive. We've got to get the money somewhere, even if we have to borrow it."

Even in these days of so-called "tight" money the individual investor considers himself fortunate if he can get a return on his money of 5 per cent with safety.

Railroads don't have this problem. It's easy for them to find ways of investing funds in their own fixed properties that will bring savings amounting to as much as 150 per cent or more annually on the amount invested. The problem with them, rather than finding ways to invest their money, is to obtain the funds needed to take advantage of the multitude of "investment" opportunities available to them.

These statements are based on the results of a survey made by Railway Age to determine the motivating factors behind the large improvement programs now being carried out involving the railroads' fixed properties. A particular aim of the survey was to find out what types of improvement

projects bring the largest return on the investment.

For several years the railroads' property-improvement programs have been going up steadily. For the first half of 1957 the improvement budgets of 111 Class I line-haul carriers call for an estimated outlay on road projects of \$194,724,763, according to data supplied to the ICC's Bureau of Transport Economics & Statistics. This is 17.1 per cent above the actual expenditures of these same roads in the first half of 1956 and 56.3 per cent above the expenditures of 124 roads in the first half of 1955.

Effects of Technology

The obvious explanation of this situation is that the railroads, confronted by cost increases all along the line, are trying to offset them by making property improvements to promote efficiency. They are indeed, but there's an additional element in the situation that is making improvement projects more attractive than ever before. That element is technological advancement.

This fact kept cropping up during interviews with a score or more of top engineering officers. Among others, they were asked these questions: What types of property improvement projects are getting the most attention today? Which types produce the greatest return, and how much? How much must a project return on the investment before it is given serious consideration?

The types of improvements that came up most often in the discussions are listed in the tabulation. Only a glance is needed to determine which of these are tied up, in one way or another with developments in technology. Electronics is an important factor in a number of them, such as centralized traffic control, modern yards and remote control interlockings. Improved types of equipment for the maintenance-of-way forces have sparked a new upsurge in mechanization of these forces.

But even where there is no apparent connection with advances in technology, a second glance will usually turn up an indirect relationship. Take line and grade revisions as an example. Engineering officers point out that these projects are more attractive today because modern, mass-production grading equipment has reduced the cost of digging cuts and constructing embankments.

When engineering officers are asked what types of improvements produce the largest return they will each tick off a variety of projects, but there are three that are almost invariably mentioned—modern yards, centralized traffic control, and mechanization of track forces.

Other Sound "Investments"

For new or modernized yards the annual savings mentioned ranged all the way from 13 per cent to 75 per cent of the amount invested. For CTC projects the range was from 15 to 35 per cent. But mechanization of the track forces shows by far the largest economies. Savings of 100 per cent or more in this category are common. In fact on one road a return of 100 per cent from maintenance machines has been set as the minimum requirement to justify purchase. "We don't even request authority to buy equipment that won't pay for itself in a year's time," said the chief engineer of this line. "Some of the machines we are getting today will

ASSIGNMENT FOR EDITORS

This article is the first in a new series to appear in Railway Age. Installments will consist of a thumbnail description of specific cases where a capital expenditure involving the fixed properties is producing substantial savings. Railway Age editors have been alerted to watch for, and report on, outstanding examples where the practice of "spending to save" is paying off for the railroads.

pay for themselves in as little as three months."

High returns are also produced by projects in other categories. Here are examples of the savings from individual projects of different types: Extension of 18 sidings on one division—40 per cent; automatic protection for highway crossings—33 per cent to 150 per cent on one road; modern, oil-burning heating plant—62 per cent; remote control interlocking—25 per cent; line change 3.6 miles long—30 per cent; heavier rail—27.5 per cent; and electric switch lamps (to replace oil-burning lamps)—44 per cent.

There might be an inclination to regard these figures as representing exceptional cases, and, therefore, to assume that the returns from improvement programs as a whole are considerably "watered down" by projects that produce little or no savings. On the basis of available information this question can't be answered for the railroads as a group, but some indication of the answer can be found in the second-quarter improvement budget of one representative large road.

In the current period this road plans a total expenditure of slightly under \$2 million, from which it expects to realize an overall saving of about 25 per cent.

The fact is that improvement projects just don't get authorized these days unless they produce a substantial minimum return. On one road this minimum is 25 per cent for projects whose sole purpose is to save money, but where improved service is a factor the return may be as low as 10 per cent. Generally the minimum return required to qualify a project for authorization ranges between 15 and 20 per cent.

Competition for Budget

In any event, every proposed capital expenditure has a rocky road to travel before it can expect to reach the stage of final authorization. On some roads those projects that promise the most improvement in service are given top priority; on others those that offer the largest and quickest return on the investment get preference. But whatever may be the practice on individual roads, it's apparent that the different items on any proposed budget are always in keen competition with each other, for the money

Partial List of "Paying" Projects

Here are some of the types of new facilities and improvements that are producing savings for the railroads today:

- Centralized traffic control
- Modern electronically controlled yards
- Remote control interlockings
- Line and grade revisions
- Automatic highway crossing protection
- Extension of passing sidings
- Mechanization of track forces
- Heavier rail and track fastenings
- Electric switch lamps
- Automatic oil-fired heating plants
- New freight and passenger stations

supply is generally insufficient to cover more than a small fraction of the proposed projects.

What effect have wage increases had on the savings from improvement projects? Answers to this question vary considerably. Engineering officers of some roads explain that wage increases have not materially affected savings percentagewise as construction costs and operating savings "usually go up in about the same proportion."

Others say that increased wages

tend to enhance the savings from improvement projects. This seems to be particularly true where expenditures are made to effect direct savings in payroll costs. Purchases of maintenance-of-way machinery are an example. Automatic protection for highway crossings is another. As one chief engineer put it: "Every time wages go up another notch, it becomes that much easier to justify expenditures for highway crossing gates where we now have manual protection."



HIGH RETURNS justify investments in new yards.

How FM Power Paces New 'Talgo'

The New Haven's Talgo-type lightweight train, the "John Quincy Adams," is now in regular service. Consisting of five ACF-built "cars," with a 1,750-hp Fairbanks-Morse locomotive* on each end of the train, it is expected to reduce travel time between New York and Boston from four to less than three hours. Third-rail power is used on approaches to Grand Central Terminal.

Each of the two locomotives on the New Haven's "John Quincy Adams" is equipped with a single 1,750-hp Fairbanks-Morse engine which drives two 600-volt traction motors and a 436-volt, 3-phase, 56.7-cycle alternator for train power. A total of 1,200 hp is always available for traction. With this amount of power, it is expected that the train can operate at speeds up to 115 mph, since the low centers of gravity of the locomotives and cars permit relatively high safe speeds in negotiating curves. Possible acceleration rates can bring the train up to 80 mph in 4.45 minutes. Time en route is saved because there is no need to change from electric to diesel operation at New Haven, or vice versa.

*First described in *Railway Age*, Dec. 5, 1955, p. 60.

The locomotive weight is 216,000 lb, as compared with 250,000 to 320,000 lb for a conventional locomotive of comparable power. The Talgo coaches average less than 700 lb per passenger, or less than half the weight of conventional equipment.

The engines on the locomotives run at a constant speed of 850 rpm, providing constant frequency for train power. Output of traction power is controlled by varying generator field strength with an amplidyne exciter.

The traction generator is a conventional GE shunt-field machine with a series winding for cranking the engine from the battery. The two traction motors on the trucks at the cab end are GE 752's widely used for diesel-electric locomotives. A standard belt-driven 12-kw, 75-volt

d-c generator, driven by the diesel, provides power for battery charging, controls, lighting and alternator excitation.

Additional equipment is provided to permit operation from third-rail power. The main d-c generator is driven directly through a flexible coupling, but the 233-kw alternator and an added 600-volt d-c generator are driven through an overriding clutch. During diesel-electric operation, this auxiliary 600-volt machine supplies power to the air compressor, traction motor blowers and fan motors.

Third-Rail Operation

When the locomotive moves into third-rail territory, however, this d-c generator becomes a motor operating

"JQA" Is Second Scheduled U.S. Talgo Service

INTRODUCTION of the "John Quincy Adams" on the New Haven's New York-Boston run follows, by more than a

year, the beginning of the first regularly scheduled ACF-Talgo operation over the Rock Island between Chicago and Peoria, Ill. The Rock Island's "Jet Rocket" has four cars while the New Haven train is composed of five of the 3-unit cars, but structurally all of these cars are duplicates.

Talgo cars are composed of three integrally articulated units. The extreme ends of each of the 3-unit cars are equipped with Waugh twin-cushion draft gears; Ohio Brass special tight-lock

couplers which automatically make all the air and electrical connections when coupled; and with buff-type diaphragms to provide passenger protection between cars. The wheels of the 3-unit cars are located so as to support the car at all times whether it is connected to an adjoining car or not. The 3-unit assembly always operates as a car in service and is disassembled at intermediate articulated joints only for major overhaul.

The side entrance doors are constructed to allow operation with the high- or low-level platforms. This is accomplished by ACF's Hi-Lo door with the roof section at the vestibule properly adapted for such operations. The New Haven operation does involve stations with high-level platforms.

The overall length of the 3-unit car is 109 ft 5½ in. and the length of each of the individual units is 34 ft 6½ in. The overall height is 10 ft 10 in., and overall width is 10 ft 2 in. The 3-unit

←
DECORATIVE SCHEMES in adjacent cars alternate, but Chinese red, deep blue and gray are the principal colors in all of them. Floor level varies between 26 in. and 28 in. above the rail depending on load.





on third-rail power and performs its primary function of driving the alternator, assuring uninterrupted train service. The traction motors, as well as the 600-volt motor-driven auxiliaries, then get their power supply directly from the third rail. Despite the normal variations in third-rail voltage, the alternator is run at con-

stant speed by using the amplidyne exciter to govern excitation of the drive motor.

When starting the train in diesel-electric operation, the engineman operates a controller handle in the conventional manner. The controller progressively increases amplidyne excitation and resultant main generator

excitation, developing a family of generator curves similar to conventional locomotive curves with a variable speed engine.

During third-rail operation, automatic resistor control is provided for acceleration in 12 steps under control of a current relay. Notching is automatic but under the control of

coach weighs 70,500 lb. Each car is suspended on 4 single-axle trucks. Each truck has two independently-turning, 28-in., one-wear wheels mounted on stub axles. These wheel assemblies are in turn mounted on a U-shaped frame. Each wheel has a tread-type package brake unit with a 16-in. Cobra shoe. All of the air brake equipment is Westinghouse's "26."

Electric Heating

The coaches each have reclining seats for 96 passengers. There are two toilets and a vestibule at one end. Underframes, sides and roofs are prefabricated and then assembled to form an integrated, tube-like, stressed-skin structure. The assembly of the welded, low-alloy steel underframe and the riveted 6061-T6 aluminum body framing with its corrugated stainless-steel exterior sheathing riveted on the outside meets applicable AAR strength requirements.

Individual Talgo coaches have a maximum electrical requirement of approx-

imately 55kw. This is supplied by 440-v, 3-phase, a-c power train-lined from the locomotive. Each car has an emergency lighting system supplied by a 12-v Nife storage battery charged from the a-c supply. Main lighting in these coaches is by two lines of ceiling-mounted 440-v a-c, fluorescent fixtures, and there are individual reading lights in the luggage racks over each seat.

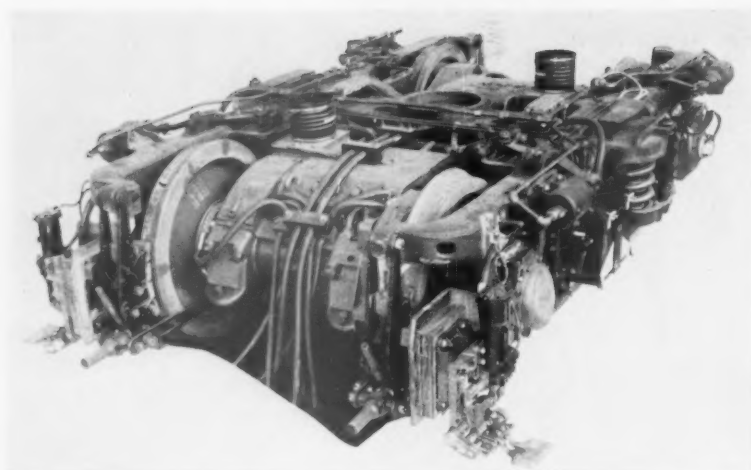
Two five-ton Trane air conditioning units are located in diagonally opposite corners of the coach and the air is distributed through the car in a center-ceiling duct with Multivent diffusers. Finned resistance-type electrical heaters in the air conditioning units and strip type a-c heaters at the side walls provide all of the heating. At the side wall a panel heating effect is achieved as convection draws air behind the wainscot at floor level and discharges the warmed air at the sill of each window. These windows are Adlake double-glazed, breather type sash units with Adlake curtains. Temperatures are regulated by Minneapolis-Honeywell electronic controls.

Insulation of the floors and roofs of these cars is Dednox and Gustin-Bacon aluminum foil Fiberglas. The floor is Plymetal covered with vinyl plastic over sponge cushion. Interior side lining is aluminum covered with General Tire's Textileather. Partitions are faced with Formica and are either plywood or Haskelite Styrofoam. All doors were supplied by the Met-I-wood Corporation.

No "Diner" Provided

The Heywood-Wakefield reclining seats have wing-type head rests which are upholstered in burnished antique-black leatherette complementing the charcoal-gray upholstery below. Hardware and toilet fixtures were supplied by Ajax-Consolidated, Crane, Mink-Dayton and Sunroc. Wash water is heated with an Ogontz electric heater.

Unlike the Rock Island train, there is no dining car on the "John Quincy Adams." There are facilities for sandwich and beverage service which will be available at the passengers' seats.



TWO MOTORS on one truck of each engine provide traction from either diesel or third-rail power.

the engineman who may vary the rate of acceleration with the same controller handle used for diesel-electric operation.

Ventilation

The engine rooms of the locomotives are pressurized plenum chambers which repel seepage of dirt. All air is taken at roof level and supplied by a blower, with a capacity of 20,000 cfm at 0.5 in. of water, through a set of self-scavenging centrifugal dirt separators.

All equipment in the engine room draws on this clean air supply. Air for the diesel is cleaned again in centrifugal separator intake air cleaners which are continuously scavenged through aspirators in the exhaust stacks. The main generator and other

rotating equipment in the room are cooled by self ventilation, discharging a high percentage of the total volume of cooling air to atmosphere. The motor-driven two-stage air compressor draws air from the chamber and discharges through a finned-tube after cooler to two main reservoirs connected in series. The reservoir supply pipe is connected to a trainline pipe to assure adequate compressed air supply on the leading locomotive in an emergency.

Each traction motor is force-ventilated with outside air by a motor-driven blower directly below the cab. This air is cleaned of snow and dirt particles of harmful size by skimming vanes on the outer periphery of the blower.

A separate section at the rear of the main engine room houses the

engine cooling system, including radiators, inlet shutters and motor-driven exhaust fan. The 725-gal fuel tank is installed between the two radiator banks and shaped to give minimum interference with air flow. It provides more than enough fuel for a New York-to-Boston round trip with a 2-hour 30-minute layover under full auxiliary load and ample reserve for delays en route.

Dropped Mid-Section

A number of design elements contribute to the performance of the locomotive. Basically, it is a streamlined carbody on two four-wheel swivel trucks. Main sills are set on 69-in. centers with a dropped mid-section to permit mounting the engine with lower crankshaft centerline just 48 in. above the rail. Line of draft at the rear coupler is nominally 21 in. above the rail. Truck bolsters are supported on coil springs on 97-in. centers, with friction-type snubbers operating in parallel with the springs. Swing hangers are suspended from lugs cast on the outside face of the truck frame.

Clasp-type brakes on all wheels are readily accessible for inspection. With composition shoes, the brakes will produce a retardation rate of about 1.5 mph per second when a total brake shoe force equal to only 35 per cent of the weight of the locomotive is applied. The air brake control equipment utilizes one trainline pipe for both control and air supply. An estimated time of 3.5 seconds is required to complete full service application throughout the train, 2 seconds for an emergency application.

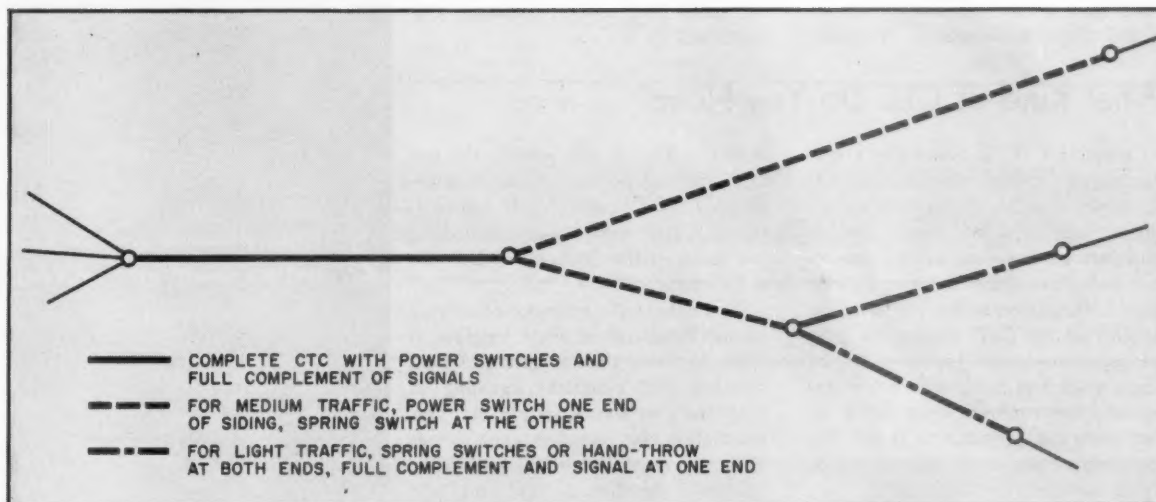


ENGINEMAN'S CONTROL station in the locomotive cab.



TIGHT-LOCK COUPLER at the rear of a locomotive.

OPPORTUNITY BLUEPRINT . . .



VERSATILE CTC opens the door for widespread new applications—and assures big returns.

How to Adapt CTC to Your Traffic

Because of increases in railroad operating expenses, centralized traffic control can be profitably installed on approximately 35,000 miles of single-track in the next 10 years. Most of this mileage comprises lines where CTC has not previously been given serious consideration because it would have cost too much in proportion to the relatively small number of trains. For such lines, modified forms of the system can now be installed for about the same cost as conventional automatic block. The 35,000 miles in-

cludes about 10,000 miles not previously signaled, as well as perhaps 25,000 miles where existing automatic

block can profitably be replaced with CTC. Is some of this mileage on your railroad?

Saving in Operating Expenses

Conventional automatic block signaling provides protection to prevent accidents, but it necessitates continued use of timetables and trains orders to authorize train movements. This requires the services of operators at offices all along the line. Railroads may have difficulty now in finding

enough men to work as operators, especially at outlying offices. Furthermore, because of the 40-hour week and increases in wages, the annual expense for maintaining one office, open 24 hours every day, may range from \$20,000 to \$22,500 annually. If open offices are spaced too far apart, trains waste time waiting on sidings.

Both of these problems, i.e., necessity for operators, and delays due to the train order system, can be eliminated by CTC, because its basic feature is that signals at sidings and junctions, throughout an entire operating division of 100 miles or more, are controlled from one office. These signals not only provide complete protection, but also authorize train movements, superseding the historic train order practice.

The planning of any CTC project properly includes first of all consideration of the length and the spacing of the sidings, because they are important factors in determining the cost of the installation and the benefits in

What Is Medium or Light Traffic?

The volume of traffic that will justify some form of CTC is not measured, solely, by the total number of trains operated in an average 24-hour period. Rather, the capacity to keep all trains moving, with minimum delay, depends on the number of meets on a given section, such as 100 miles, within a period of a few hours. Grades, curves, tonnage and train speeds, as well as spacing between sidings on a time-distance basis, are other factors. Therefore, each territory must be studied carefully.

When the modified CTC was installed on 240 miles of the Burlington in 1951 the daily traffic included four passenger trains, four through freights, two to four locals, and several extra freights.

When the same form of modified CTC was installed on 148 miles of the Canadian National in 1953, the daily traffic ranged from a low of about 10 trains to a high of about 16 to 18 trains. In summer three passenger trains were operated each way, and in winter two. The daily peak was in the mid-afternoon, when all the passenger trains met in this CTC territory.

On the 98-mile territory where the Milwaukee installed the modified system in 1947, the normal traffic daily now includes one through passenger train each way daily, two time freights each way, a local freight westward three days and eastward three days, each week, and extra trains as required.

operating economies. All of the modified forms of CTC include coding equipment and a line circuit for control from one machine, usually placed in the dispatcher's office. If traffic

subsequently increases, additional signals or power switch machines can readily be installed without changing the basic line control system. The next question is . . .

What Kind of CTC Do You Need?

Complete CTC is essentially a system which includes control not only of signals to authorize all train movements, but also of power switch machines at the ends of sidings, so that trains can enter or leave without stops for trainmen to line the switches. Application of CTC during the past 30 years on about 19,800 miles of single track has been, with a few exceptions, this complete system (Fig. 1). Railroads will continue to install this complete system where the volume of traffic warrants the investment.

The big opportunity for CTC today, however, is on lines with lighter traffic, perhaps six to eight through trains and maybe a local each day. The problem here, as viewed by many railroads, is to select some modified form of CTC that requires less equipment. For lines with relatively light traffic, systems can be modified to reduce costs by (1) using fewer switch machines; (2) using fewer signals; and (3) adopting modern signal techniques.

Various Modifications

For medium traffic lines, the Burlington has made extensive installations of a modified CTC with a power switch machine and full complement of signals at only one end of each siding.

A spring switch with a leave-siding dwarf is used at the other end, and the move to take-siding is directed by a signal that also serves as an approach signal. The whole arrangement is shown in Fig. 2.

The power switch and all the signals at such a siding are controlled by one line code field station, further reducing cost. With its first project, completed in 1951 on 240 miles of single track between Ravenna, Neb., and Alliance, and others completed in more recent years, this railroad now has 500 miles of line so equipped.

A generally similar system, with power switch at one end of sidings and spring switch at the other, was installed in 1952 on 148 miles of single track on the transcontinental line of the Canadian National, between Foleyet, Ont., and Hornepayne. As

shown in Fig. 3, this permits the use of two-aspect signals and omits intermediate signals except for approach signals. This system was installed on 363 miles of the Quebec North Shore & Labrador in 1954.

A single-track project, completed on the Pittsburgh & West Virginia in 1950, included six sidings with spring switches and complete signaling at both ends, as shown in Fig. 4. This installation also included seven sidings with spring switches at both ends; complete signaling at one end; and take-siding and leave-siding signals at the other.

Simplest Forms

Hand-throw switches were installed at both ends of 11 sidings on a 98-mile single-track installation made in 1947 by the Milwaukee, between Aberdeen, S.D., and Mobridge, part of the through route between Chicago and Seattle. In this system, as shown in Fig. 5, all train movements over all main track switches, and from siding to siding, are authorized by signal indication, under the control of the dispatcher. A somewhat similar simple and economical form of train operation by signal indication, with hand-throw switches as shown in Fig. 6, was installed in 1947 by the Seaboard Air Line on 247 miles of single track, handling a light volume of important through traffic between Coleman, Fla., and Miami.

Such modified systems of train operation by signal indication now in service on railroads, and other forms advocated by signal manufacturers, offer a wide selection of ways and means to obtain the benefits of CTC at minimum cost, appropriate to the volume of traffic.

New techniques available to further reduce first cost and maintenance expenses are (1) modern two-way coded track circuits; (2) recently developed high-speed, large capacity line coding systems; (3) continuous "viewing" of locations of trains, aspects of signals and position of switches; and (4) more compact control machines by which

(Continued on page 48)

1 **COMPLETE CTC** has power switches at both ends of sidings — fully signaled.

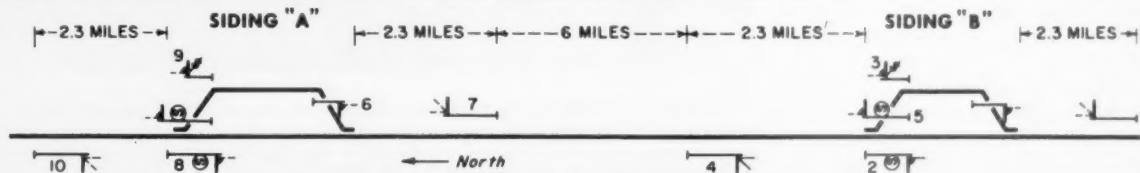
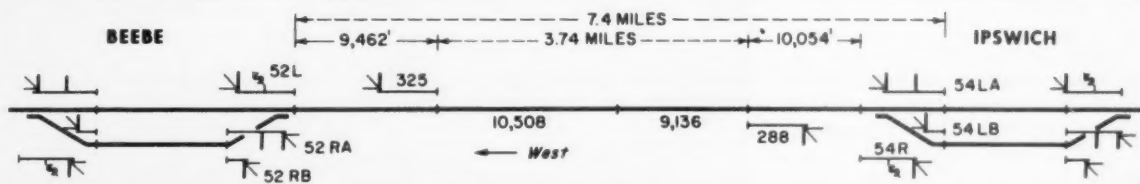
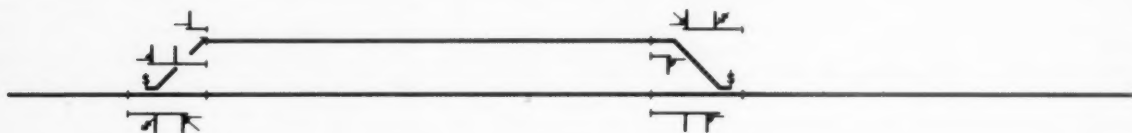
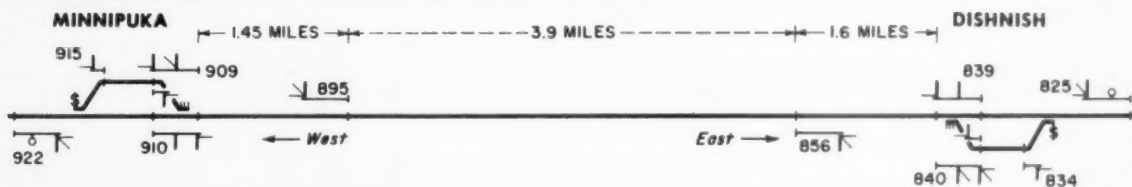
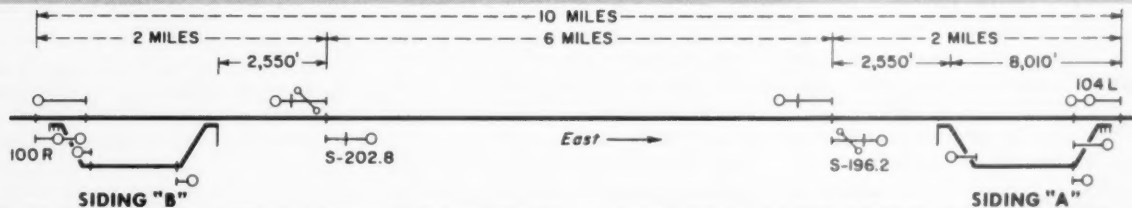
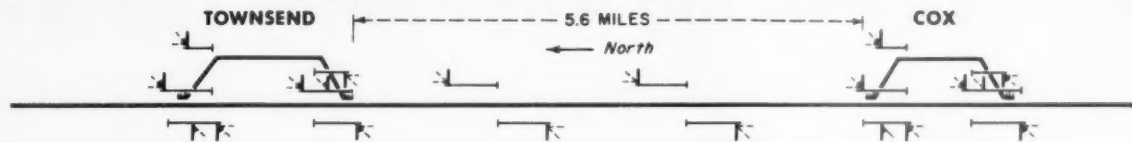
2 **FULLY SIGNALLED** with one power switch and one spring switch per siding.
(Burlington)

3 **FEWER SIGNALS** with one power switch and one spring switch per siding.
(CNR)

4 **SPRING SWITCHES** at both ends of sidings.
(P&WV)

5 **HAND-THROW SWITCHES** at both ends of sidings, with full signaling.
(Milwaukee)

6 **SIGNALS AT ONE END** of sidings, with hand-throw switches at both ends.
(Seaboard)



Are We Making Any Money Today?

At least one railroad—the Chicago & North Western—feels that railroad accounting today doesn't give management good answers in time to mean much. Management wants to know now, not next month, how the road did last month. First steps in that direction have been taken on the C&NW.

Inside a statistical fortress on Chicago's north side, some traditional railroad accounting tables are being turned. The Chicago & North Western is modernizing and mechanizing its Ravenswood accounting office to make accounting more of an adviser to management than a collector and belated analyzer of statistics.

For instance:

North Western's accountants are setting up their books—and programming their IBM machines—to yield the information the line's management needs to chart the course of business. The reports needed by the ICC and AAR will come, then, pretty much as a by-product.

The road is giving the job of book-keeping back to its bookkeepers. At 56 stations on the 9,500-mile system, traffic and operating personnel who have kept voluminous station accounts are finding that the machine service bureau is doing most of that chore.

With the new set-up, supervisors at five levels of management will know exactly how they stand each month in relation to their budget—and know without puzzling over financial statements which would probably be misleading if they could be understood.

Only a Start

Right now, the job of overhauling the North Western's accounting procedures has progressed far. But if the thinking of the road's top officers and an intensive study of integrated data processing are any indication, the work done to date may, in a few years, be looked back on as merely a first step toward revolutionary uses—for the railroad industry, anyway—of what might be called “managerial electronics”—electronics at the policy level.

North Western officers would like to know, for example, whether any particular freight train is making money even while it rolls across the

countryside. And if they can, they're going to set up the machinery to find out.

The work being done at Ravenswood is directly related to Chairman Ben W. Heineman's feeling that the answer to many of railroading's fiscal ills is mechanization in ways not yet dreamed of—and also to his impatience with waiting until next month to find out how the North Western did last month.

Neither goal is very clearly in sight yet, but the employees of the machine service bureau at Ravenswood are overjoyed with what's happened.

More to Come

Basically, the machine service bureau itself is a consolidation and enlargement of machine accounting functions already being performed at Ravenswood. The entire second floor has been air-conditioned and remodeled from floor to ceiling. The staff of 120 will be increased to about 230 when all machines including the typewriters of the stenographic pool

come under the bureau's jurisdiction.

On a broader scale, the bureau is the heart of a systemwide program of accounting modernization which Larry S. Provo, the North Western's vice-president and comptroller, estimates will cost \$1.3 million.

Ravenswood today handles the North Western's revenue, disbursing and freight claim accounting. And since last January 1, when the Chicago, St. Paul, Minneapolis & Omaha subsidiary was absorbed, Ravenswood has been doing all the Omaha's accounting, too.

About \$350,000 has been spent in preparing the office for the consolidated machine bureau. The North Western has replaced some of its older IBM machines with faster models and has leased new ones until today about 150 are in use. Annual rental runs about \$500,000—twice what it was before the improvement program got under way.

Seventy-one key-punch machines are putting out close to 3 million punched cards a month. The system of responsibility accounting set up



MODERN MACHINES and modern methods at the North Western's Ravenswood accounting office in Chicago are showing the railroad that mechanized accounting can be profitable—and possibly can, in the future, play a big part in actually running the railroad day by day.

by the North Western and Arthur Andersen & Co. will make the output about twice as big. Ravenswood today processes nearly a million pieces of paper a month—all containing numbers that mean something—in addition to the punched cards.

Specifically, the jobs of the IBM tabulating machines at Ravenswood are largely those done by machines on many railroads. The office handles all passenger and freight-car accounting for the system (except for LCL, which isn't mechanized—yet) and all interline car accounting.

The 56 stations for which Ravenswood does most of the paperwork account for nearly 70% of the North Western's freight business. All the agent at one of these stations does is bill the freight and collect the money. Twelve employees in the machine room do a job which formerly took 115 out on the line.

Payroll accounting for the system is handled at Ravenswood, as is accounting and paying for material purchased by the road and vouchering of freight claim payments.

A preliminary form of responsibility accounting has already been applied to the North Western's inventory of track material, with what the overseers of the IBM machines think are spectacular results. Better control is expected to mean a reduction in inventory amounting to several million dollars. The men at Ravenswood have a master catalog of track parts and prices compiled and printed on the IBM machines. On October 1 the remainder of the road's inventory controls will be cut over to this system.

But a significant point is made by F. K. Hauff, assistant comptroller and director of the machine service bureau: For all the wonderful things

they can do, IBM tabulating machines can say, in electronic language, only "yes" or "no." They can't say "maybe."

And so if a decision is necessary to resolve a "maybe," it is up to a man to make the decision.

Consequently, the North Western's use of IBM machines isn't as extensive as some other roads', Mr. Hauff points out, in that Ravenswood doesn't go so far in repeated matching of punched cards. Certain abstracting and interpreting jobs, too, can be done as easily by typists as by machines, in his opinion.

Perhaps of most importance, accounting modernization has started the North Western along what its people believe can only be a profitable path—that of knowing, at any given moment, how the railroad is operating financially—and where there's money to be made.

Railroading



After Hours with *Jim Lyne*

RAILROADS AND ILLINOIS—I have often thought that it would be helpful to have the "railroad story" told state by state—that is, reporting the industry's significance to specific states. And now the job has been done, for one state at least, in an attractive illustrated booklet entitled "Your Illinois Railroads," published by the Illinois Railroad Association. Hal Sims, p.r. director for the Western Railways, sent me a copy.

The booklet reveals the number of railroad employees in Illinois (110,000); and the number of Illinois workers in industries whose main business is supplying the railroads (200,000). It tells of railroad taxes in Illinois (\$534 million), railroad purchases in the state, and so on.

I'd suppose it would be worth-while to do this kind of job for practically every state in the union, because the story does differ from state to state—but in all of them, without exception, it is an account that should interest civic-minded citizens.

MORE ON "PRO"—Answers to the question, why a freight bill is called a "pro" (short for "progressive number") continue to come in. Among them Traffic Manager Nelson Hickok of Western Paper Converting Company at Salem, Ore.; Assistant General Superintendent of Transportation H. F. Walker of the CNR at Toronto; W. D. Cool, general auditor of the Colorado & Wyoming; Assistant Professor Newton Morton of Kent State University (Ohio); P. J. Newman, chief clerk agent of the MoPac at Monroe, La.; J. F. Blair, general manager of the Association of Western Railways; Professor Southworth Lancaster of Boston University; C. J. Ownby of the UP at Brighton, Colo.; L. J. Trexler, retired auditor of the Apalachicola Northern; Agent A. M.

Eckstein of the N&W at Roanoke; F. X. Langer, agent of the Minn. Transfer. Mr. Langer says that the term "freight bill number" is now "preferred usage."

RR ADVERTISING ON CARS—If a box car would make a good billboard for product advertising, then why wouldn't it be equally good for railroad advertising? A railroad public relations officer, who prefers to remain anonymous, asks this question. I believe a railroad which puts its name on its cars in letters big enough to be easily read—and keeps its cars attractively painted—is already doing exactly what my p.r. friend advocates. And an increasing number of railroads are doing just that.

But my friend would like to go further. He'd have each railroad use its own color scheme, and also letter in the road's slogan. Of course, some roads already use their slogans on freight cars—and a few of them have distinctive color schemes. Cleanliness and paint are the two most effective and economical reputation builders there are, and it's hard to go wrong in more intensive application of either.

Speaking of advertising—I was brought up short by that multiple-pager of the trucking industry in a recent issue of Life magazine. The idea they seek to put over, evidently, is that "everything you get comes to you by truck." This is like persuading people to believe that taxicabs are the only important form of passenger transportation—because most trips begin and end with a taxi ride.

But, if you tell a half-way plausible story impressively and often, some people are going to believe it. And an outfit that has, and is willing, to spend \$150,000 (or thereabouts) for just one ad in one magazine isn't one to laugh off. Those boys are no pikers.

(Continued from page 17)

rates on fourth-class mail, which includes parcel post.

While the present petition promises a more specific proposal to be submitted later, it indicated that increases calculated to raise annual revenues by about \$4,300,000 will be needed. The petition was filed because the Post Office Department was confronted with a legal requirement that it withdraw no funds appropriated for its operations until it takes steps to put the rates for fourth-class mail on a cost-of-service basis.

1/20 of Truckers Get 2/3 of Industry Gross

Nearly two-thirds of 1955 revenues reported by for-hire truckers was collected by 4.8% of the operators. This is pointed up by calculations of the ICC's Bureau of Transport Economics and Statistics.

The bureau's figures show that the 18,000 truckers reporting to the commission in 1955 realized aggregate gross revenues of \$5,534,900,000, of which \$3,444,700,000, or 62.2%, went to 860 carriers with 1955 gross in excess of \$1,000,000 each. The 3,150 operators in the \$200,000-to-\$1,000,000 revenue class (17.5% of the total) accounted for \$1,409,000,000, or another 25½%, of 1955 revenues.

Nearly one-third of the truckers (5,700) each had 1955 gross of no more than \$25,000, and their revenues accounted for only \$58,000,000, or 1.1%, of the year's total. Next largest group was the 3,300 in the \$25,000-to-\$50,000 revenue class, and they got only 2.1% of the revenues. Nine percent went to two groups within the \$50,000-to-\$200,000 range. In those groups were 4,990 truckers, 27.7% of the total.

Hay-Rate Reduction Saved Farmers Nearly \$4 Million

Voluntary 50% reductions in hay rates by railroads serving the Southwest's drought area have meant short-term savings to farmers of \$3,707,040, the Texas Railroad Association estimates.

From October 13, 1956, to last March 31, when the reduced rates ended after drought-breaking rains, the railroads carried into the area 20,753 carloads (324,476 tons) of hay. The state hardest hit by the drought, and benefiting most from the reductions, was Texas.

Reduced rates on hay and grains have been credited with saving the

herds of thousands of small ranchers and dairymen, a TRA spokesman says (Railway Age, Feb. 11, p. 9). Over the past several years, rate slashes in the stricken area have meant an overall saving of more than \$26 million, he added. No other form of transportation has offered the lowered rates.

TOFC Keeps Growing; FEC Says It's in Fold

One more railroad, the Florida East Coast, is adding piggyback to its services. The FEC announced last week that it is tying up with the Great Southern Trucking Company in TOFC service between Miami and Jacksonville.

Spokesmen for the Atlantic Coast Line and Seaboard Air Line, however, reported that their companies plan no inauguration of piggyback at present.

FEC piggyback will be operated on a daily basis, the railroad reported. It is building loading ramps and other facilities at its two terminals and will move Great Southern's trailers on daily through freight schedules between the two points.

Another TOFC development last week was announcement by the Baltimore & Ohio that its piggyback network is being extended to take in a 15th city—Dayton, Ohio.

Organizations

RR Apprenticeship Meeting To Be Held July 18-20

The first National Railroad Apprenticeship Conference will be held in Houston, Tex., July 18-20. Harold M. Hoffmeister, assistant to chief mechanical officer, Missouri Pacific, and chairman of the conference, announced that the meetings, to be held in conjunction with the ninth annual Southern States Apprenticeship Conference, were developed as a result of recommendations of special committees set up to study the desirability of such a conference for the railroad industry.

Conference speakers will discuss qualifications and selections of apprentices; related instructions and the use of labor management committees; job rotation and work schedules; reducing turnover and record keeping; training in each craft, and what happens to apprentices upon completion.

Conference registration will start July 17 at the Rice Hotel.

Allied Railway Supply Association-Committee of the Coordinated Associations.—John D. Ristine has been elected secretary of the ARSA and secretary of the CCA, with offices at 80 East Jackson blvd., Chicago 4. Mr. Ristine, who succeeds R. E. Coughlan, resigned, will continue to represent the Frost Paint & Oil Corp. in Chicago.

American Institute of Electrical Engineers.—The institute's Committee on Land Transportation will hold three technical sessions at the summer general meeting in the Sheraton-Mount Royal Hotel, Montreal, June 24-25. The program includes a symposium on electrification of railway commuter service.

American Society of Traffic & Transportation (New York Chapter).—At the chapter's recent first general organization meeting, Bert H. Peterson, district sales coordinator, Johnson Motor Lines, was elected chairman, and Frank E. Asher, president, Traffic Managers Institute, was elected vice-chairman.

Association of Railroad Advertising Managers.—Newly elected officers are: President, Carlton T. Sills, advertising and publicity manager, Denver & Rio Grande Western; first vice-president, Alex K. Robertson, advertising manager, Missouri Pacific; vice-president, Emory F. Waldrop, Jr., assistant general passenger traffic manager, Seaboard Air Line; vice-president, G. R. Jackson, advertising agent, Pullman Company; treasurer, J. D. Singer, assistant advertising manager, Chesapeake & Ohio; executive secretary, Albert W. Eckstein, advertising agent, Illinois Central.

Association of Railroad Safety Officers of Chicago.—Officers for 1957 are: Chairman, L. C. Hahney, Elgin, Joliet & Eastern; vice-chairman, F. L. Lewis, Pullman Company; secretary-treasurer, Charles D. Blue, Chicago & Eastern Illinois.

Chicago Railroads' Car Accounting Officers.—D. B. Ramsay, auditor of equipment accounts, Milwaukee, has been appointed chairman for 1957.

Interstate Commerce Commission.—First meeting of the commission's National Defense Executive Reserve unit will be held May 7-8 at the ICC's headquarters building, Washington, D.C. The unit is part of the executive reserve program operated under general supervision of the Office of Defense Mobilization. Speakers will include Owen Clarke, ICC chairman; Commissioner Kenneth H. Tuggle; and Francis A. Silver, chief of mobilization planning for the commission.

Mid-West Shippers Advisory Board.—Newly elected officers for 1957 are: General chairman, L. E. Olson, assistant director of traffic, Great Lakes Carbon Corporation; alternate general chairman, J. G. Borson, general traf-

fic manager, Hotpoint Company; general secretary, L. J. Hackl, traffic manager, Ladish Company; chairman, executive committee, A. C. Shaw, traffic manager, Curtis Companies, Inc. Edward J. Hassig continues to serve as field secretary.

National Mediation Board.—The board is now in new headquarters at the National Rifle Association Building, 1230 16th street, N.W., Washington, D.C. NMB headquarters had been in the so-called Old Interior Building, 18th and E streets, N.W.

National Railway Historical Society.—Theme of the annual convention, to be held in Roanoke, Va., August 31-September 2, is "Steam and Electricity in the Switzerland of America."

Pacific Northwest Advisory Board.—The 98th regular meeting will be held in the Olympic Hotel, Seattle, Wash., June 20-21.

Rail Traffic Association of Cincinnati.—Newly elected officers are: President, H. P. Chatron, general agent, Reading; vice-president, W. H. Bachmann, general agent, Wabash; secretary-treasurer, C. E. Walbrun, general agent, Ann Arbor.

Financial

Dividends Declared

ATLANTIC COAST LINE.—50¢, quarterly, payable June 12 to holders of record May 1.

BANGOR & AROOSTOOK.—60¢, quarterly, payable June 28 to holders of record June 7.

CLEVELAND & PITTSBURGH.—4% guaranteed, 50¢, quarterly; 7% regular guaranteed, 87½¢, quarterly, both payable June 3 to holders of record May 10.

CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS.—5% preferred, \$1.25, quarterly, payable April 30 to holders of record April 20.

ERIE & PITTSBURGH.—guaranteed, 87½¢, quarterly, payable June 10 to holders of record May 31.

LITTLE MIAMI.—original capital, \$1.10, payable June 10, September 10 and December 10, to holders of record May 17, August 16 and November 18; \$1, payable March 10, 1958, to holders of record February 17, 1958; special guaranteed, 50¢, quarterly, payable on same dates as original capital dividend, to holders of record on same record dates.

LOUISVILLE & NASHVILLE.—\$1.25, quarterly, payable June 12 to holders of record May 1.

NEW YORK CENTRAL.—50¢, quarterly, payable June 10 to holders of record May 17.

NORTHERN OF NEW HAMPSHIRE.—\$1.50, quarterly, payable April 30 to holders of record April 11.

ONTARIO & QUEBEC.—\$3, semiannual, payable in Canadian funds June 1, to holders of record May 1.

PHILADELPHIA, GERMANTOWN & NORRISTOWN.—\$1.50, quarterly, payable June 4 to holders of record May 20.

PIEDMONT & NORTHERN.—\$1.25, quarterly, paid April 20 to holders of record April 5.

PITTSBURGH, YOUNGSTOWN & ASHTABULA.—7% preferred, \$1.75, quarterly, payable June 3 to holders of record May 20.

WEST JERSEY & SEASHORE.—\$1.50, semiannual, payable June 3 to holders of record May 15.

WESTERN PACIFIC.—75¢, quarterly, payable May 15 to holders of record May 1.

People in the News

AKRON, CANTON & YOUNGSTOWN.—R. E. Schroeder and John F. Bresnahan appointed general agents, Chicago.

BANGOR & AROOSTOOK.—Vinal J. Welch appointed assistant engineer, engineering department, Houlton, Me., succeeding J. W. Stannix, resigned. Mr. Welch was formerly with the engineering department of the Erie.

William M. Houston, attorney, Bangor, Me., appointed assistant counsel.

CANADIAN NATIONAL-GRAND TRUNK.—Elmer E. Hoffman, assistant general agent, New York, appointed general agent, freight traffic department, Cleveland, succeeding Hayden W. Seale, retired.

Edwin Gallant appointed acting general passenger agent, Montreal, succeeding N. A. Landerman, named district passenger agent, Quebec.

CHESAPEAKE & OHIO.—John J. Holden and C. Craig Kimball, assistant general attorneys, appointed general attorneys, headquarters remaining at Detroit and Cleveland, respectively.

CHICAGO & NORTH WESTERN.—Harold W. Jenson appointed engineer of track; John P. Datesman, process engineer; E. L. Barnes, assistant process engineer; James A. Barnes, assistant to engineer of maintenance—all at Chicago.

C. C. Ehler named chief mechanical engineer, Chicago.

T. A. O'Donnell, assistant freight traffic manager, Chicago, retired March 31.

CLAREMONT & CONCORD-SANFORD & EASTERN-MONTPELIER & BARRE-HOOSAC TUNNEL & WILMINGTON.—Russell Stevens appointed assistant to president of these roads, Boston, Mass. Mr. Stevens was formerly connected with the Detroit, Toledo & Ironton in New England.

COTTON BELT.—N. E. Knepper appointed general agent, Nashville, Tenn., succeeding R. J. Morris, transferred to Chattanooga, Tenn., to replace W. L. Roper, retired.

DELAWARE & HUDSON.—Noah H. Williams, bridge and building master, Oneonta, N.Y., appointed division engineer, Pennsylvania-Susquehanna division at that point, succeeding William J. Schramm, transferred to the Saratoga-Champlain division at Albany. Mr. Schramm succeeds Earl E. Crowley, who retired April 1.

Paul F. Robinson, assistant general counsel, appointed general solicitor, New York. John F. Reilly, former general solicitor, Lackawanna, named general attorney, D&H, Albany.

DEPARTMENT OF THE ARMY.—Colonel Morton E. Townes, currently serving as U.S.

Army assistant chief of transportation (traffic), Washington, D.C., promoted to Brigadier General.

ELGIN, JOLIET & EASTERN.—G. F. Bachman appointed chief mechanical officer; W. R. Ware, assistant to chief mechanical officer, and H. W. Harshorne, office manager, all at Joliet, Ill.

GULF, COLORADO & SANTA FE.—C. F. Stanford, Jr. appointed trainmaster, Galveston, Tex., succeeding V. V. Anderson, named rules examiner, Galveston, with jurisdiction over the Gulf Lines. J. H. Thomas appointed trainmaster-road foreman of engines, Beaumont, Tex.

LACKAWANNA.—James F. Mulligan, assistant general attorney, New York, appointed general attorney.

MINNEAPOLIS & ST. LOUIS.—Thomas J. Powers appointed assistant comptroller in charge of the revenue accounting department. Mr. Powers was formerly senior accountant with Peat, Marwick, Mitchell & Co., Chicago.

MISSOURI PACIFIC.—Thomas B. Arnold appointed general agent, St. Louis, succeeding Walter B. Mueller, retired.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—W. C. Love will leave railroad business April 30 to enter private practice and will be senior bridge designer with Capitol Engineering Corporation for highway design in Viet Nam. Last October Mr. Love became principal assistant engineer, NC&StL, Nashville, Tenn., and was succeeded as division engineer by W. N. Daniel.

NORFOLK & WESTERN.—J. K. Goodwin, head of the Bituminous Coal Institute's field staff for District Five, Detroit, appointed assistant district manager, N&W's Cincinnati coal bureau, succeeding Alvin Johnson, whose promotion to manager, Detroit coal bureau, was noted in Railway Age, Jan. 7, p. 40.

NORTHERN PACIFIC.—G. L. Slorah, superintendent, Idaho division, Spokane, Wash., transferred to the St. Paul division, Minneapolis, to succeed C. W. Coil, retired. Mr. Slorah's successor is N. M. Lorentzen, superintendent, Rocky Mountain division, Missoula, Mont., who in turn is replaced by J. O. Davies, special assistant to the vice-president of the operating department, St. Paul. W. L. Wood, superintendent, Yellowstone division, Glendive, Mont., has exchanged positions with I. W. Brewer, superintendent, Lake Superior division, Duluth, Minn.

PITTSBURGH & WEST VIRGINIA.—Walter C. Kresge, assistant general superintendent, Pittsburgh, appointed general superintendent there, succeeding W. E. Robinholt, retired from active duty, but continuing as consultant.

PULLMAN COMPANY.—James E. Flannery, general superintendent of shops, appointed chief mechanical officer, Chicago, to succeed Harry B. Reed, who retires April 30. James R. Mathews, assistant general superintendent of shops, named assistant to chief mechanical officer, Chicago.

(Continued on page 46)



Paul F. Robinson
D&H



James E. Flannery
Pullman

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

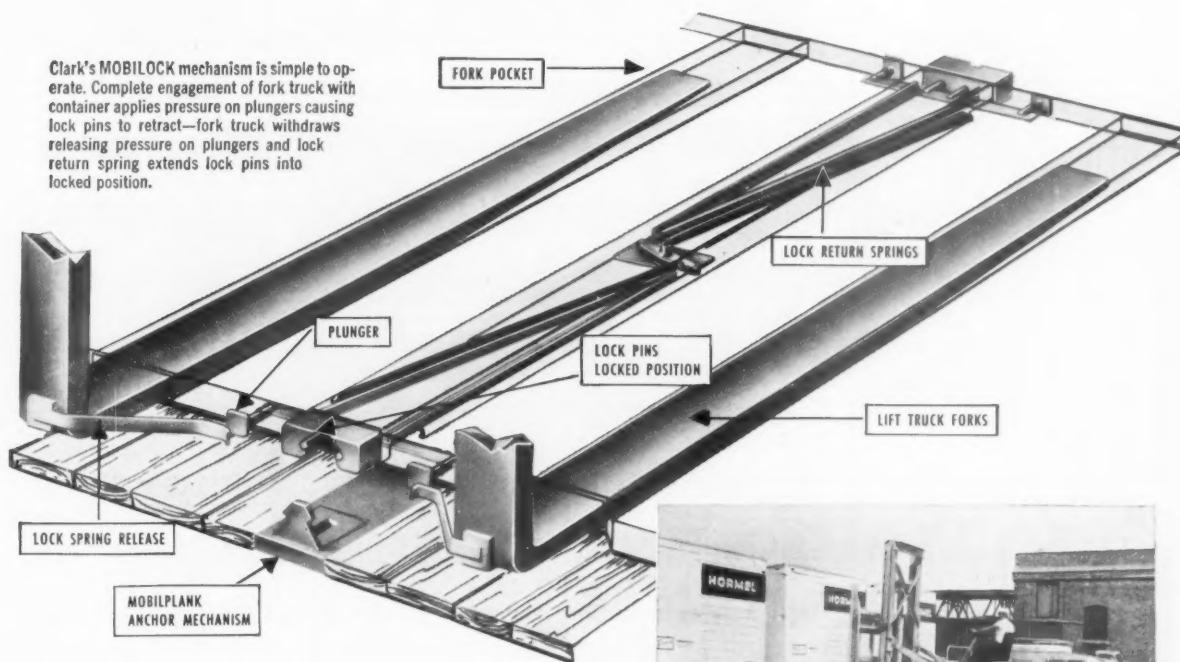
MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1955

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(More statistics on page 40)

CLARK Mobilock® and Mobilplank®-locking devices-anchor 35,000 lb. load to any carrier... AUTOMATICALLY!

Clark's MOBILOCK mechanism is simple to operate. Complete engagement of fork truck with container applies pressure on plungers causing lock pins to retract—fork truck withdraws releasing pressure on plungers and lock return spring extends lock pins into locked position.



The job of loading or unloading trucks or rail cars is NOW a job measured in seconds. Giant-sized, 35,000 lb. loads are handled in a van type container . . . and the entire job is done by one man.

It's as easy as this:

A loaded container is handled by a Clark fork truck and is placed on rail flat car or truck bed equipped with a Clark MOBILPLANK anchor device. Insert forks—container is automatically unlocked; remove forks—container is automatically locked. At destination the load is removed as easily.

The MOBILOCK and MOBILPLANK devices have been tested and proved with over 35,000 lb. loads and up to 40 g impacts! They are simple in construction, built for rugged duty . . . need *no maintenance*. They self-align and properly seat the container; are adaptable for new or existing equipment; and are interchangeable between carriers. They are low in cost. It is the *only* completely automatic locking system for large containers that lends itself to *standardization* for all mediums of transportation.

For complete details write or wire.



Industrial Truck Division
MOBILVAN System
Trademark of
CLARK EQUIPMENT COMPANY
Bottle Creek 24, Michigan



Spector Freight System, Rock Island R.R., Hormel—These users have proved the versatility, the value of Clark's MOBILOCK and MOBILPLANK locking devices for freight handling. Ask about their experiences.

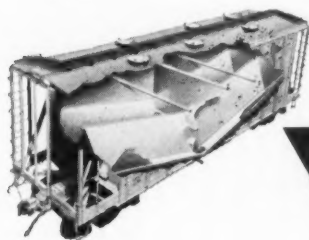
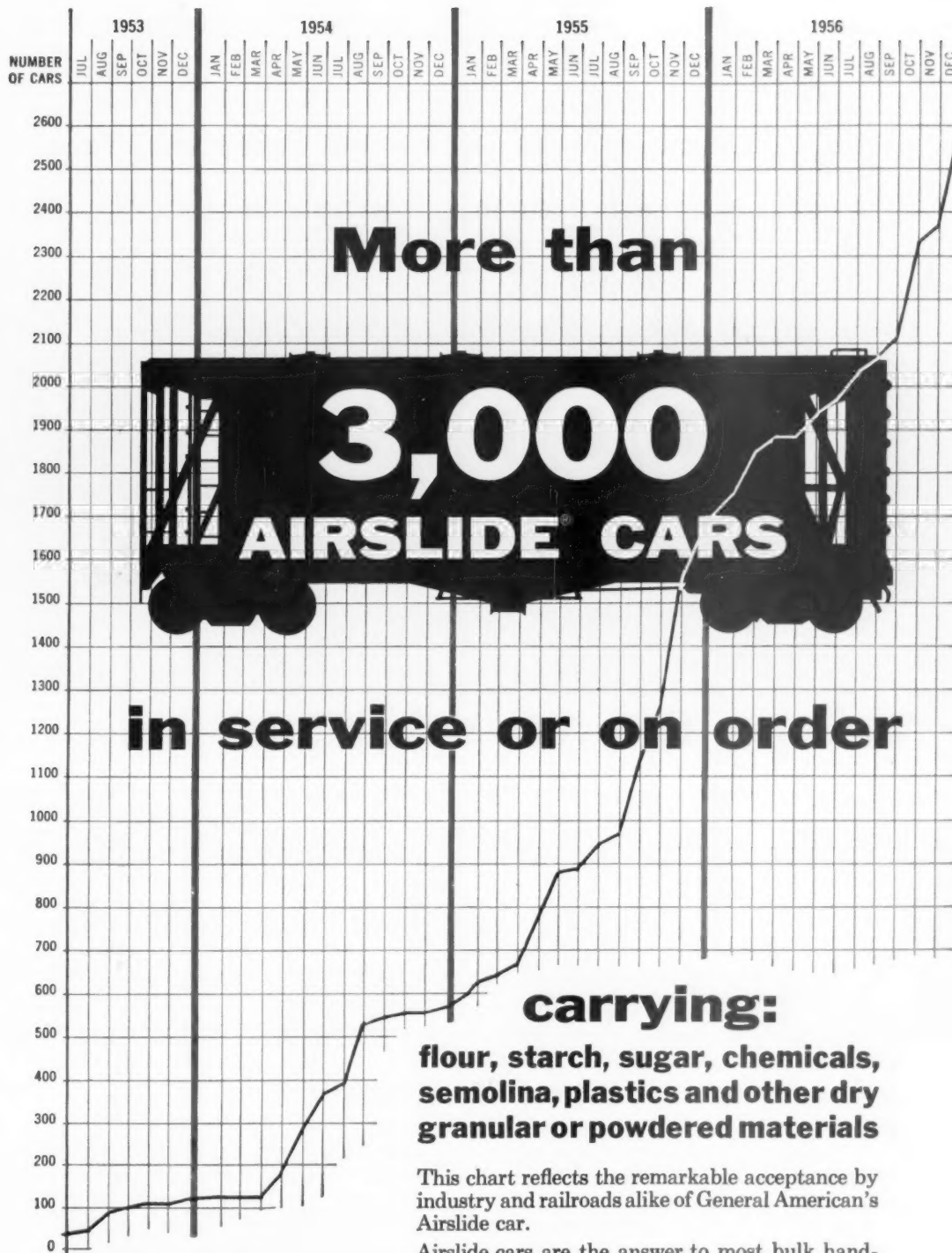
REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

40

April 29, 1957 RAILWAY AGE

Average operating period	Name of Road	Operating Revenues				Operating Expenses				Net railway operation income	Net Railway income								
		Freight		Pass.		Total		Total				Net railway tax accruals							
		1957	1956	1957	1956	1957	1956	1957	1956										
Feb.	Ala. Joliet & Eastern	236	2,883	196	263	117	762	3,851	3,003	64.3	97.5	1,694	420	355					
2 mos.	Ala. Joliet & Eastern	1,541	17,541	1,049	1,246	519	5,149	20,597	16,090	94.6	97.9	3,435	1,377	647					
2 mos.	Ala. Joliet & Eastern	2,397	25,488	1,636	2,270	644	6,258	22,997	18,543	94.1	98.0	5,072	1,943	1,229					
Feb.	Florida East Coast	571	5,943	466	42	685	1,345	2,814	2,587	74.2	73.4	976	286	375					
2 mos.	Florida East Coast	3,791	3,522	2,099	189	189	1,345	5,827	5,228	75.2	74.7	1,938	581	451					
Feb.	Georgia Railroad	321	864	120	130	153	133	34	41	289	81	89.5	41	26					
2 mos.	Georgia & Florida	332	1,247	329	66	91	33	39	61	219	257	88.9	34	16					
2 mos.	Georgia & Florida	332	1,247	329	66	91	33	39	61	219	257	88.9	34	16					
2 mos.	Grand Trunk Western	951	9,270	438	1,010	1,824	186	163	1,721	8,713	82.5	83.6	188	594	161				
Feb.	Great Northern	8,265	15,949	1,427	17,466	2,922	4,845	14,358	15,952	15,517	98.4	84.8	1,704	1,126	214				
2 mos.	Green Bay & Western	224	34,375	99	378	49	60	1,111	14,338	35,284	73.2	64.6	1,137	3,468	1,408				
2 mos.	Gulf, Mobile & Ohio	2,724	8,749	792	6,775	738	99	1,274	2,259	5,254	4.58	67.5	251	130	68				
2 mos.	Gulf, Mobile & Ohio	2,757	11,970	684	13,594	2,149	1,968	145	2,462	5,609	4.60	75.1	2,443	855	741				
Feb.	Illinois Central	6,303	19,592	1,835	23,753	3,692	3,648	395	4,122	8,627	18,433	10,164	78.1	76.1	9,095	1,534	2,095		
2 mos.	Illinois Central	3,339	39,762	3,803	47,234	7,514	7,216	785	8,371	18,303	38,281	36,732	80.0	77.6	9,558	4,997	2,994		
Feb.	Illinois Terminal	6,303	39,762	3,803	47,234	7,514	7,216	785	8,371	18,303	38,281	36,732	80.0	77.6	9,558	4,997	2,994		
2 mos.	Kansas City Southern	891	3,494	852	3,090	352	46	400	481	1,447	2,170	2,166	55.4	56.2	1,412	770	115		
2 mos.	Kansas City Southern	891	7,168	174	6,640	634	656	969	969	2,370	4,408	4,408	55.6	57.7	3,547	1,572	1,274		
Feb.	Kansas, Oklahoma & Gulf	327	442	442	81	67	29	11	32	85	259	254	56.5	57.8	184	79	112		
2 mos.	Lake Superior & Ishpeming	148	171	159	48	44	16	171	154	3	4	174	206	179	270	300	1	70	
Feb.	Lake & Hudson River	96	268	269	254	35	33	2	36	30	18	19	185	73.6	77.6	153	29	3	
2 mos.	Lake & Hudson River	96	541	519	69	69	5	72	72	203	409	384	75.1	75.0	132	52	8	22	
Feb.	Lehigh & New England	178	503	503	508	539	67	65	172	205	44	22	194	516	529	101.5	98.2	8	22
2 mos.	Lehigh Valley	1,176	991	1,267	1,081	1,278	126	131	366	401	1,057	1,093	97.8	98.3	69	137	188	137	188
2 mos.	Lehigh Valley	1,147	10,121	570	11,289	1,423	1,510	195	2,249	2,955	9,929	9,258	80.0	83.2	1,360	923	1,360	923	1,360
2 mos.	Lehigh Valley	1,147	10,121	570	11,289	1,423	1,510	195	2,249	2,955	9,929	9,258	80.0	83.2	1,360	923	1,360	923	1,360
2 mos.	Lehigh Valley	1,147	10,121	570	11,289	1,423	1,510	195	2,249	2,955	9,929	9,258	80.0	83.2	1,360	923	1,360	923	1,360
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2 mos.	Lehigh Valley	1,147	10,121	570	11,289	1,423	1,510	195	2,249	2,955	9,929	9,258	80.0	83.2	1,360	923	1,360	923	1,360
2 mos.	Lehigh Valley	1,147	10,121	570	11,289	1,423	1,510	195	2,249	2,955	9,929	9,258	80.0	83.2	1,360	923	1,360	923	1,360
2 mos.	Lehigh Valley	1,147	10,121	570	11,289	1,423	1,510	195	2,249	2,955	9,929	9,258	80.0	83.2	1,360	923	1,360	923	1,360
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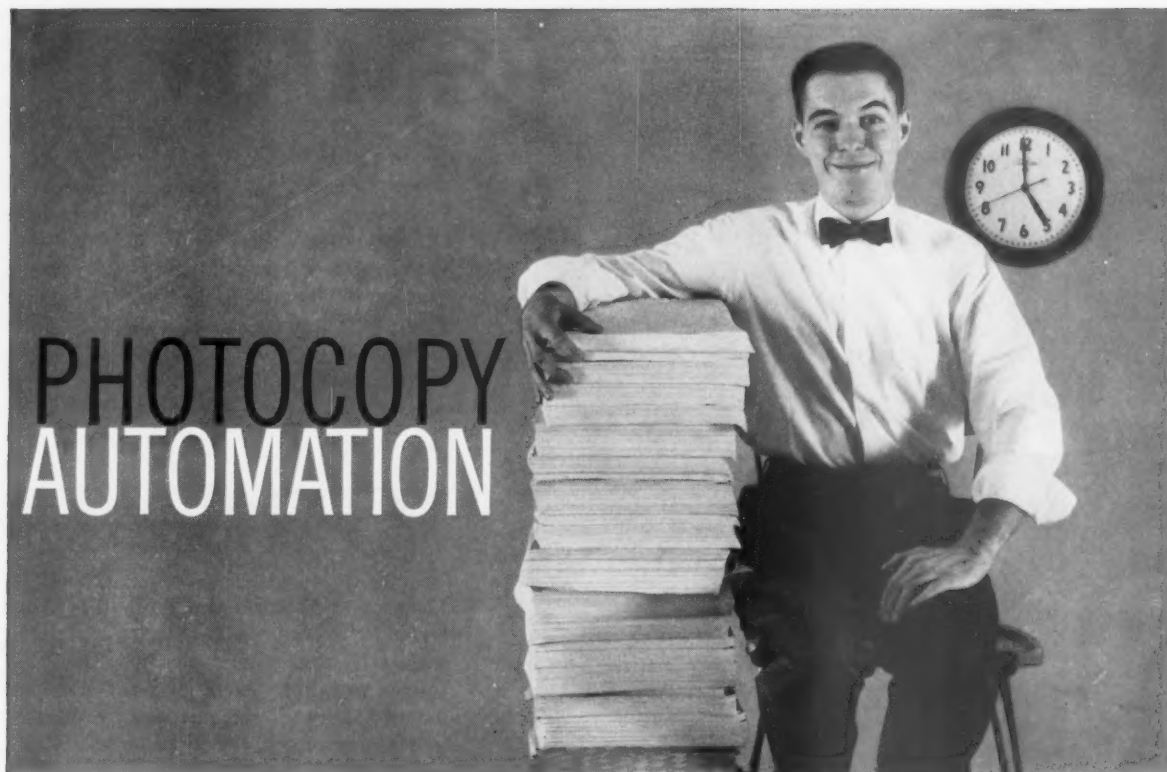
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REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1957

Name of Road	Average operated mileage period	Operating Revenues				Operating Expenses and Deprec.				Total 1956	Total 1957	Total 1958	Traffic 1957	Total 1957	Operating ratio 1957	Net from railway operation	Railway tax accruals	Net Railway income 1957-1958		
		Pass.		Freight		Total		Total												
		1957	1958	1956	1957	1956	1957	1956	1957											
Norfolk & Western	2 mos.	1,074	353	18,088	18,328	2,753	2,482	309	4,236	4,140	829	372	8,709	18,928	13,317	77.0	72.7	8,942	2,271	2,540
Norfolk Southern	2 mos.	789	538	37,977	37,135	5,885	5,885	309	8,697	8,433	1,684	746	42,109	27,386	27,386	76.2	72.7	9,176	2,075	2,480
Norfolk Southern	2 mos.	789	538	37,977	37,135	5,885	5,885	309	8,697	8,433	1,684	746	42,109	27,386	27,386	76.2	72.7	9,176	2,075	2,480
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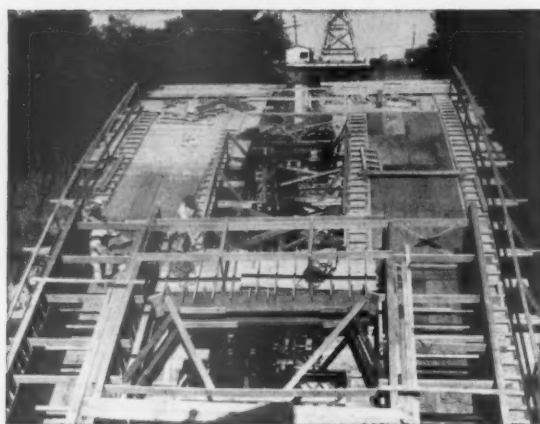
SMOOTH

When the B & O specified fir plywood for interior caboose rebuilding, the smooth, easy-to-paint surface alone justified the switch from pine tongue-and-groove lumber. Fir plywood provided other advantages, too: less heat loss in the cars, a 90% reduction in the number of pieces to be handled and about 50% less maintenance. Adopted in 1955, fir plywood is used for interior walls, ceilings, bunks, lockers, table tops and seats.



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Exterior fir plywood and overlaid plywood are preferred for every type of sign: traffic control, right-of-way, advertising, identification. One reason is the proven durability of fir plywood, here being given one of a series of vandalism tests. Compared to steel and aluminum, plywood suffered less initial damage, virtually no progressive deterioration. Other advantages: rigidity, workability, weather-resistance, excellent paint-holding.



LOW COST

Fir plywood concrete forms cut costs four ways: through faster fabrication, multiple re-use, easier stripping, smoother concrete that requires less finishing. The latter was particularly important in construction of this 564-foot arch rib bridge spanning branch tracks of the Milwaukee Railroad. Plywood forms provide design adaptability, too; smooth monolithic surfaces, curves, and special ornamental effects are easily achieved.



FIR PLYWOOD

means quality construction

FOR MORE INFORMATION about uses shown above, design and/or specification data, mail coupon —>

THERE'S A RIGHT TYPE & GRADE OF
FIR PLYWOOD
FOR EVERY BUILDING JOB







1. SPECIFY BY DFPA QUALITY TRADEMARKS

DFPA grade-trademarks appear only on plywood manufactured, inspected and scientifically tested under the DFPA quality control program. DFPA, Douglas Fir Plywood Association, is a non-profit industry organization devoted to product research, promotion and quality maintenance.

2. CHOOSE THE RIGHT GRADE FOR EACH JOB

Fir plywood comes in two types: 1. *Exterior* (waterproof glue for permanent exposure to water or weather); 2. *Interior* (moisture-resistant glue) for indoor uses, crating, sheathing, maintenance. Within each type are several grades—i.e., panels with one good side, two good sides. Most popular grades are shown below.

 EXT-DFPA Exterior plywood for permanent outdoor uses	 PLYANEL PlyPanel® for paneling, most indoor uses
 PLYSCORD PlyScord® is unsanded panel for sheathing, crating, bins, etc.	 PLYFORM PlyForm® concrete form grades come in Exterior and Interior types.

SPECIALTY PANELS include 1. *Overlaid Exterior plywood* (hard, smooth, abrasion-resistant fused resin-fiber surfaces) for siding, signs, tanks, concrete forms; 2. *Textured panels* with smart grooved, brushed or striated surfaces for fixtures, siding, special decorative effects.

DOUGLAS FIR PLYWOOD ASSOCIATION

Tacoma 2, Wash. (Good USA Only) Dept. 192
☐ Please send basic fir plywood specification data.
☐ Also send information about use of fir plywood

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Firm _____

Address _____

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Current Publications

BOOKS

THE RAILROAD STATION; AN ARCHITECTURAL HISTORY, by Carroll L. V. Meeks. 203 pages, illustrations, drawings. Yale University Press, New Haven, Conn. \$7.50.

This is primarily a study of the architecture of the Western world since 1800, as revealed by a single type of building—the railroad passenger station. In this richly illustrated history, the massive stone terminals, the glass and metal sheds, the conservative and pioneering stations of past and present are studied from both architectural and historical viewpoints. Close analysis has enabled the author to formulate a “railroad style” and to integrate it with main trends in both 19- and 20th-century architecture. There are over 200 illustrations and drawings, a comparative table of train sheds set up in chronological order, a bibliographical essay, and a comprehensive index.

BRITISH RAILWAYS IN ACTION, by O. S. Nock. 228 pages, illustrations. Thomas Nelson & Sons, 19 East 47th st., New York 17. \$6.25.

Much is being said about out-of-date equipment of British Railways, the need for increased efficiency, and so on. Mr. Nock discusses some of the problems the railways have to face, such as traffic congestion, gradients, and sheer weight of business. The overall picture is sketched in by a series of individual examples. Problems of peak holiday traffic are shown as they affect the terminal operations at Waterloo, the Western Region in South Devon, and a heavily graded cross-country route like the Somerset and Dorset. The development and use of motive power is exemplified by the modern practice of engine testing, the utilization of Britannia class engines in East Anglia, and comparison of steam locomotive with other forms of motive power. The many photographs, taken especially for this book, illustrate various facets of operation in an unusually detailed and animated form.

AN ENCYCLOPAEDIA OF THE IRON AND STEEL INDUSTRY, compiled by A. K. Osborne. 558 pages, illustrations. Philosophical Library, Inc., 15 E. 40th st., New York 16. \$25.

The purpose of this encyclopaedia—compiled by the technical librarian and information officer of the Brown-Firth Research Laboratories, Sheffield, England—is to provide a concise description of the materials, plant, tools and processes used in the iron and steel industry and closely allied industries, and to define the technical terms employed. It is designed as a work of reference and not as a textbook. Following the encyclopaedia section are conversion tables, weights and measures, properties of cer-

tain typical steels, signs and symbols, and a list of scientific, technical and trade societies and other groups related to the iron and steel industries.

TARIFF MAKERS' MANUAL No. 1-A. 300 pages, illustrations. Issued by the Railroads' Tariff Research Group; available from Guthrie Lithograph Company, 1150 First st., N.W., Washington, D.C. \$2, plus postage.

Dealing with instructions to govern compilation and filing of railroad freight tariffs, this manual contains the latest information and data on rates and tariffs, and replaces a previous one issued by the group. It contains 24 topically arranged sections in two parts. One part covers all tariff improvement policies approved since establishment of the Railroads' Tariff Research Group five years ago, and the other part includes related rules of ICC Tariff Circular No. 20. Although it was designed primarily for use as a tool to guide railroad rate and tariff makers in setting up better tariffs, railroads also will use the manual as a source book in training classes for new employees.

PERIODICAL ARTICLES

A BETTER DEAL FOR COMMUTERS, by George Alpert. *Harper's Magazine*, April 1957, pp. 29-33. Harper & Brothers, 49 E. 33rd. st., New York 16. Single copies, 50¢.

Mr. Alpert, president of the New Haven, has proposed a plan for solving metropolitan traffic problems through increased railroad commuter service subsidized by the public. His first proposal is that rail commuter lines be given, where necessary, a public subsidy in return for guaranteed, low-cost, frequent service. His second proposal is that new trackage needed to complete and extend present commuter networks should be built by a public authority and leased to railroads—again, with a firm guarantee of frequent, low-cost service.

TWENTY YEARS OF SPEED, by Donald M. Steffe. *Trains*, May 1957, pp. 40-52. Kalmbach Publishing Company, 1027 N. 7th st., Milwaukee 3. Single copies, 50¢.

Mr. Steffe examines two decades of highballing, from “Zephyrs” to “Aero-trains,” then looks at today. He concludes that “if railroads are to win in the competitive game now being played they will have to drop the French defense (referred to earlier in the article as ‘the refuge of mediocrity’) and go back to the daring gambit style of play epitomized by the spirit of 20 years ago.” The Burlington’s Twin Zephyrs—“Empire Builder” 84.4 mph run between Prairie du Chien and La Crosse is still the fastest scheduled start-to-stop run on American railroads. Mr. Steffe includes a table of “America’s Real Redballs,” which he believes to be the first tabulation of freight-train speeds to appear in any American publication. It includes (Continued on page 48)

(Continued from page 37)

RUTLAND.—This road has opened a new office at 1046 Ellicott Square Building, Buffalo, N.Y., with **Albert W. Cray** in charge as district sales representative. Mr. Cray was formerly assistant general freight agent, **New York, Ontario & Western**.

ST. JOHNSBURY & LAMOILLE COUNTY.—**Richard E. Shelgren** promoted from traffic representative to general agent, Buffalo, N.Y.

SOUTHERN.—**Henry B. Garmon**, trainmaster, Columbia, S.C., transferred to Birmingham, Ala., succeeding **J. Garland Woodall**, resigned.

Edward D. Feak, circuit design engineer, Washington, appointed assistant engineer there. **Ralph H. Lanning**, machinist, Coster shop, named assistant engineer, Charlotte, N.C.

Sam C. Sheriff, assistant trainmaster, Columbia, S.C., promoted to trainmaster there.

SOUTHERN PACIFIC.—**D. A. Buckner**, contract

attorney in the executive department, appointed contract attorney and manager of the contract bureau in the real estate department.

TENNESSEE CENTRAL.—**Ralph E. Carrier** appointed editor of the company's employee magazine, *The Highballer*, to succeed **Troy Oswell**, resigned.

OBITUARY

William J. Eck, 80, who retired in 1941 as assistant to vice-president (signal and electrical), of the **Southern**, died March 14 while on a world cruise and was buried at sea.

MacKenzie T. Hastings, commerce attorney, **Louisville & Nashville**, Louisville, Ky., died March 3.

Frank V. Sherman, master mechanic, **Louisville & Nashville**, Sibert, Ala., died March 11.

Octagon Process, Inc., has appointed **Joe Weiser** manager of its railroad sales division, with headquarters at the company's plant in Staten Island, N.Y.

John D. Loftis, formerly director of research and development of the **Rock Island**, has been appointed to the newly created post of marketing director—product projects, for **American Car and Foundry Division of ACF Industries, Inc.** He will initiate and coordinate all marketing activity associated with development or improvement of new or existing products. **John M. Perkins**, formerly with **Benton & Bowles** advertising agency, has been named promotion manager. Both will have headquarters in New York and will report to **John E. Angst**, division vice-president in charge of marketing. **Charles F. Vennick**, district sales manager of the division in Chicago, has been promoted to vice-president, sales, for the western region. He will have jurisdiction over division sales offices in St. Louis, San Francisco and Chicago, his headquarters remaining in Chicago.

Lou Kreamer, district manager of the **Safety-First Shoe Company**, has been appointed manager of the railroad sales division, with office at Holliston, Mass.

Mid-West Forging & Mfg. Co. has completed an addition to its forge shop in Chicago Heights, Ill., for the exclusive production of rail anchors. The new facilities will double the company's former rail anchor production capacity.

E. S. Rosselle has been appointed assistant sales manager of the railroad division, **Chicago Pneumatic Tool Company**. He has been transferred from the Chicago district to Philadelphia, where he will supervise railroad sales in the eastern district. **J. R. Ludwig** has been added to the railroad division sales staff at Chicago.

Ellsworth H. Sherwood, assistant vice-president, International Division, **National Malleable & Steel Castings Company**, has been elected vice-president of the division. He has been succeeded by **Lawrence A. Pomeroy, Jr.**, traffic manager of the company.

Sperry Rail Service has obtained exclusive world marketing rights, in the field of railroad communications, to a diversified line of radio equipment manufactured by **Harmen Electronics Company**. Some of the equipment presently is in the service on American railroads, while other items have not yet been introduced commercially.

The following members of the **Transportation Equipment Division** sales department of **American Steel Foundries** retired March 31: **W. S. Spieth, Sr.**, district sales manager, Chicago; **R. C. Moss**, president, **American Steel Foundries International**; **J. T. Rowbottom**, district sales manager, New York.

J. E. Shaffer, president of **Seaboard Railway Equipment Company**, has been appointed sales agent to eastern railroads for **Equipment Research Corporation** of Chicago.

D. Alcott Kelly and associates, who, through the **Prime Manufacturing Company**, have distributed and serviced products of **Graham-White Manufacturing Company** in the railroad field only, have organized the **Graham-White Sales Corporation** for the exclusive sale, distribution and service of all products of the company in the railroad and other fields.

Supply Trade

Duane C. Salisbury, former vice-president and general sales manager, **Detroit Color-type Company**, has joined the **Simmons-Boardman Publishing Corporation** as vice-president. He will be director of sales for the railway division, including **Railway Age**. Mr. Salisbury has been active in sales management in the publishing and graphic arts fields for 20 years and, while with **Colortype**, was sales counsel to the **VanderKloot Associated Companies**. From 1943 to 1948 he headed advertising sales for the **McGraw-Hill Publishing Company's** transportation magazines. He was president and general manager of the **Carter Company**, Detroit, from 1943 to 1955, when he became associated with the **Colortype Company**.

W. J. Madden, formerly assistant electrical engineer of the **Pennsylvania**, has entered the service of **Gibbs & Hill, Inc.**, consulting engineers, New York. Mr. Madden retired from service with the railroad last December 31, after more than 45 years' service.

Oscar Bergman, southeastern representative of the **Air Brake Division, Westinghouse Air Brake Company**, Washington, D.C., has been appointed district engineer there, and has been succeeded by **W. V. Steele**, who has rejoined the company.

Robert N. Scott has been elected executive vice-president of **Flannery Manufacturing Company** and **Fort Pitt Manufacturing Company**. He was previously vice-president and director of sales.

John G. Frischkorn, district sales manager for **Cleveland Tramrail Division of Cleveland Crane & Engineering Company**, has been named assistant sales manager, at the company's Wickliffe, Ohio, headquarters.

Raymond P. Townsend, who has retired as vice-president and manager for the transportation industry of **Johns-Manville Sales Corporation**, is now acting as a manufacturer's representative and consultant on railroad and industrial sales problems, with office in New York.

The agricultural sales, department of

United States Borax & Chemical Corporation has moved its north central district office from Kansas City to 3456 Peterson avenue, Chicago.

Patrick J. Biggan, a former master mechanic on the **Rock Island**, who has been engaged in railway supply sales in San Antonio, Texas, since 1952, has formed a company known as **P. J. Biggan & Associates**, which represents **C & D Batteries, Inc.**, in Texas, Louisiana and Arkansas.

Motor Wheel Corporation, through its national railway sales representative, **TZ Railway Equipment Company**, is now the exclusive distributor of **Flexo-4** malleable iron journal box lids. Distribution rights were acquired from **National Malleable & Steel Castings Company**, giving **Motor Wheel** a complete line of journal box lids.

Louis W. Pingel, special representative in the transportation department of **International Business Machines Corporation**, has been appointed senior special representative, transportation department, for the eastern sales region.

W. H. Bahrenburg, Jr., formerly supervisor of track of the **Reading**, has joined **Eastern Railway Supplies, Inc.**, New York, as a sales representative.

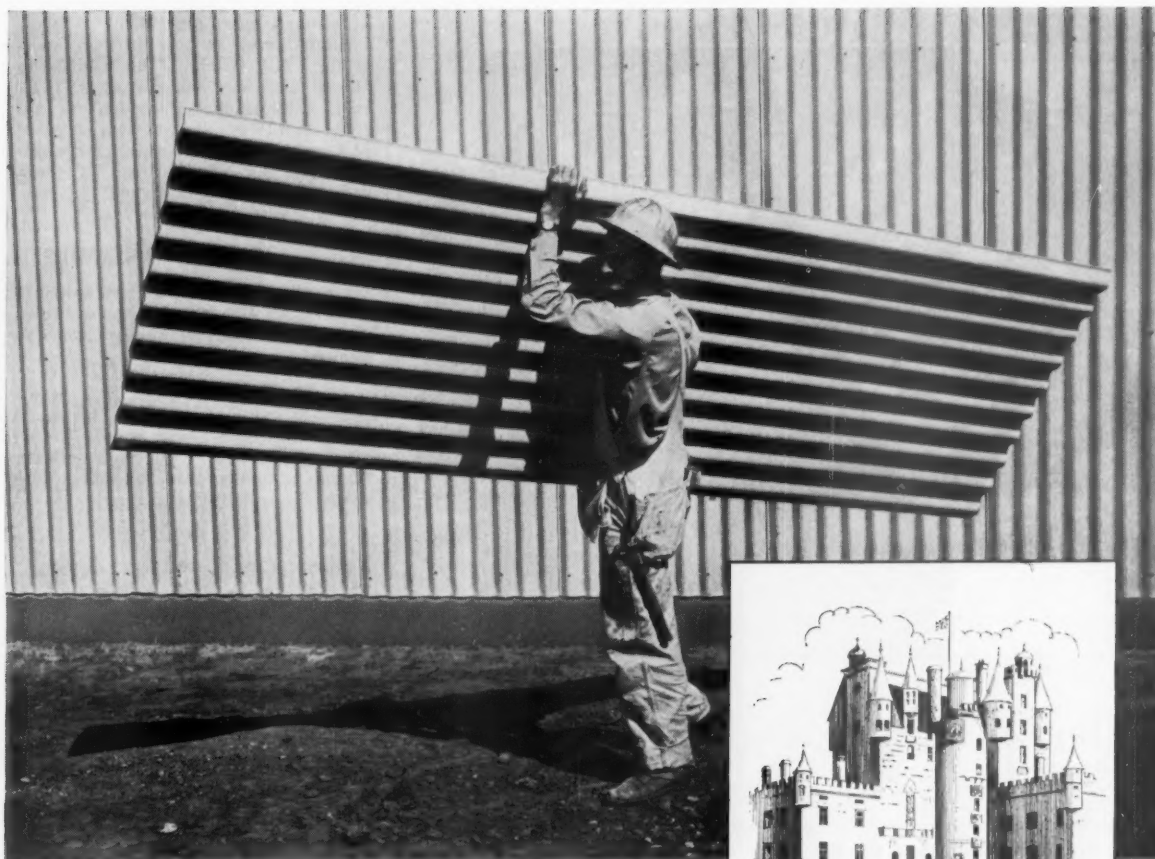
The headquarters of **J. G. Wallace**, assistant manager of railway sales, **Texas Company**, have been moved from New York to the company's Chicago offices.



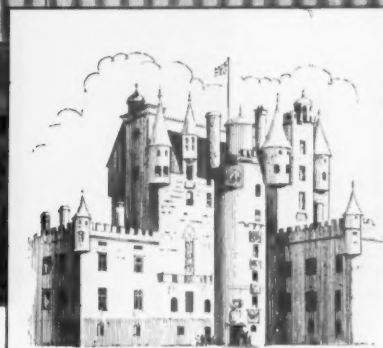
Charles F. Vennick



Duane C. Salisbury



Build years of service into roofs and walls



Constructed of stone in 1675-87, Glamis Castle in Scotland has withstood the ravages of weather and time. Glamis is the ancestral home of Queen Elizabeth of Great Britain.

Johns-Manville Corrugated Asbestos Transite wears like stone

For durability, Corrugated Transite is one of the most lasting building materials ever developed. Made of two practically indestructible minerals—cement and the ageless rock, asbestos—Transite looks and wears like stone. Like the famous old stone castles, original installations of Corrugated Transite are still giving service and protection under conditions which destroy other forms of roofing and walls.

Corrugated Transite can't burn, can't rot, can't rust. It has high resistance to acids, to gaseous fumes, to severe temperatures, to vermin and insects.

You save money on maintenance. Corrugated Transite requires no painting, no preservative treatment. It provides maintenance-free construction.

Corrugated Transite offers a way to save money on new construction and remodeling. The

large sheets are low in first cost . . . require no special tools for application . . . can be installed quickly and easily over skeleton frame construction . . . are 100% salvageable.

For more specific information, write Johns-Manville, Box 158, New York 16, N. Y. In Canada: 565 Lakeshore Rd. East, Port Credit, Ont.



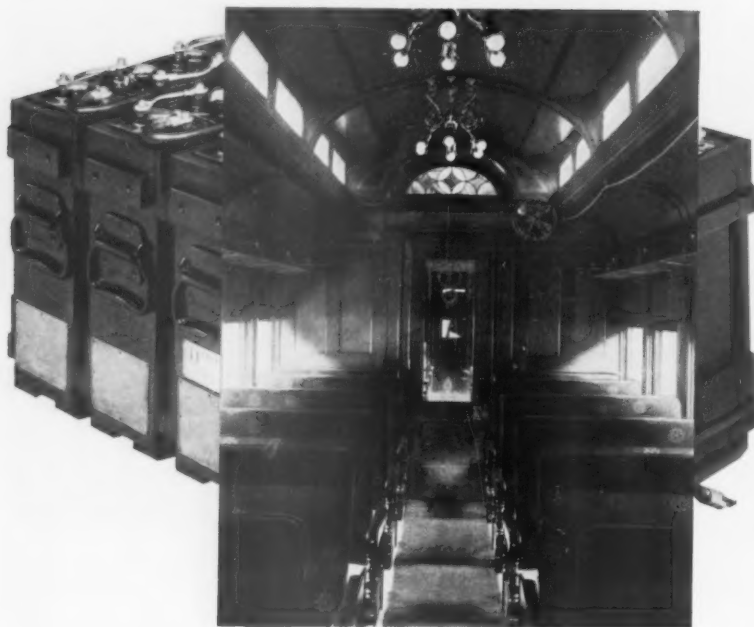
Johns-Manville congratulates the American Institute of Architects on its 100th Anniversary.

—Consult an architect—use quality materials.



Johns-Manville

This car is gone . . .



but its battery is still in service!

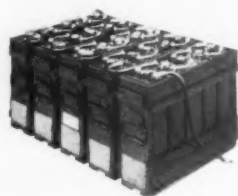
RAILROADS have consistently reported a high average life for the EDISON batteries they use. Service life for one railroad averaged 26.18 years; in another, 18.04 years; still another averaged 22.4 years—and one battery was 40 years old! *Proof that Edison batteries last far longer than other types!*

In addition, it is possible to further extend the useful life of an EDISON battery by decreasing the load requirement. For example, a 110-volt EDISON battery which has had a normal service life on an air-conditioned car, can be reassembled into 32-volt batteries for use under lesser load requirements, such as a head-end car.

Many car-lighting batteries have been transferred to smaller load duties such as railway caboose communication thus giving many additional years' service. EDISON batteries' exclusive design protects you from "sudden failure" due to physical or operating abuse—another reason why you can rely on

EDISON for superior performance, lower operating costs.

For further information, call your Edison sales engineer or write Edison Storage Battery Division, Thomas A. Edison Industries, West Orange, N. J.



Railroads depend on Edison batteries for five important power services

—operating power on industrial trucks • stand-by power for communications equipment on caboose cars • stand-by power for air conditioning and lighting on passenger train cars • stand-by power for all types of railway signaling • multiple unit controls.

Edison NICKEL-IRON
-ALKALINE **Storage Batteries**

... a product of Thomas A. Edison Industries of



(Continued from page 45)

schedules timed at over 50 mph, start-to-stop. The fastest is the Seaboard's "75 Merchandiser" which runs the 111.2 miles from Hamlet (East Jct.) to Andrews in 125 minutes, or at a speed of 53.4 mph. In other tables Mr. Steffe lists candidates for a speed hall of fame, and 10 "hot ones" of today.

PAMPHLETS

5 MINUTE SAFETY TALKS FOR RAILROAD SUPERVISORS AND FOREMEN. National Safety Council, 425 N. Michigan Avenue, Chicago 11. Single copies, \$1.95.

A safety talk for each week in the year—26 on transportation subjects, 26 for maintenance-of-way people — all written by Daniel P. Russell, supervisor, Bureau of Safety, Loss & Damage Prevention, Canadian Pacific.

FREIGHT RATE STREAMLINER (4th Edition). Chicago & Eastern Illinois Railroad. Dept. RA, 332 S. Michigan Ave., Chicago 4.

A newly revised edition of the C&EI's ingenious simplification of freight-rate computations for all parts of the U. S. First edition appeared in 1950.

How to Adapt CTC

(Continued from page 32)

one man can effectively control more territory.

There is in the United States and Canada roughly 10,000 miles of single track main line not now signaled, where the traffic today may well justify some form of track circuit controlled signaling, if for protection only. Here the logical action is to install one of the modified forms of CTC, because this can be done at a cost that is about the same as complete conventional automatic block. The added cost, if any, is justified by reduced operating expenses.

Another consideration is that much of the 55,000 miles of single-track automatic block signaling in service employs old equipment. Much of this old automatic block includes more signals than would be required for modified CTC. Thus, from the standpoint of signal maintenance, as well as reduced wages due to operators relieved, the operating expenses could be reduced by changeover to CTC. It is estimated that careful studies will reveal at least 35,000 miles of line on which CTC could profitably be installed in the next ten years.

FREE — to Railway Age Advertisers and Subscribers

Complete list of the 92 classification yards equipped with electric and electro-pneumatic retarders.

Includes number of tracks and types of retarders. Prepared by the Research Department of Railway Age.

Write now for this valuable list

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CLASSIFIED ADVERTISEMENTS

Rates: \$10 per column inch (1" deep x 1 1/8" wide)
Equipment used or resale acceptable in this section

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RAILROAD CARS FOR INTERPLANT USE
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ERMAN-HOWELL DIVISION
332 South Michigan Avenue
Chicago 4, Illinois
WEbster 9-0500

Position Wanted

Canadian, age 32, married, seeks position anywhere with energetic railroad operation offering challenge and opportunities for advancement. Seven years extensive training in single track mountain operation under Standard Code acquired in Latin America. Recent administrative position on 130 mile road proves ability to accept responsibility. Address Box 827, Railway Age, 30 Church St., New York 7, N.Y.

FOR SALE

1500 KW RECTIFIER
WESTINGHOUSE — Mercury Arc. Ignitron 3/60/44,000 AC-15,000V. DC, Automatic Controls.
2—750KW. GE Rotary Converters-HCC-6-600V. DC.
S. M. DAVIS
510 LaSalle St. Louis 4, Missouri

BRIDGE CONSTRUCTION

Tenders are invited by the Sault Ste. Marie Bridge Company for the construction of a 370 foot railroad lift bridge over the South Ship Canal at Sault Ste. Marie, Michigan. Tenders must be delivered to the office of the Chief Engineer of the Soo Line Railroad, Minneapolis, Minnesota not later than 10 A.M., May 9th. Plans and specifications are on file for inspection at the Soo Line Office in Minneapolis and the Corps of Engineers Offices in Detroit and Sault Ste. Marie. Copies of plans and specifications will be furnished at a fee of \$23.00.

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POSITION OPEN

Well established railway supply company in mid-west has opening for Mechanical Engineer 35-40 with experience in freight car design and departmental supervision. Submit resume including age, experience, and salary requirements. Address Box 45, RAILWAY AGE, 79 West Monroe Street, Chicago 3, Illinois.

**BUY
BONDS**

Take advantage of space
in the Classified
Section

How to Make Jobs More Secure

The public criticism that has come to the new management of the Missouri-Kansas-Texas—because of sharp and sudden reductions and shifts in forces—has alarmed many railroad people. The situation is one of proper concern to them, because the reputation of any one important railroad always “rubs off” to a greater or less degree on the entire industry.

But many of the critics of the new Katy regime seem not to have accorded much importance to the fact that it is the first duty of the management of an enterprise to make it profitable. Most of the business people who have been critical of the Katy—if their own businesses were running “in the red”—would have taken steps parallel to those taken by M-K-T’s management.

Explanation Helps

The most constructive action yet taken to stem the tide of criticism directed at the Katy is, probably, the statement by President W. N. Deramus, 3rd—quoted in our last week’s issue—wherein he explained reasonably and persuasively the necessity for the economies he has effected. He also conceded forthrightly that “perhaps some of the methods used could have been better handled.” If Mr. Deramus had done more explaining like this before the event, it is likely that most of the criticism would have been avoided.

But railroad people who believe that Mr. Deramus was tardy or reticent in “selling” his course of action to the public may profitably reflect on this question: *Whether the railroad industry generally has done as thorough a job as it could in explaining to employees and the public the urgent necessity for greater economy in the use of labor.* Many railroad people are hesitant about calling attention to “labor-saving” improvements—as if the movement in this direction were, somehow, slightly shameful. Actually, it is the only route to prosperity and job-security in the railroad industry.

The average American is buying about 9 times as much electric power as he did in 1920—and his patronage of barber shops has not increased at all. It probably has declined. The big reason is that the price of electric power today is less than half what it was in 1920, while the price of barbers’ service has increased four or five hundred per cent.

Security of employment is greatest in those industries which give the customer the most for his money. In a period of inflation—the only way there is of keeping prices competitively low is to substitute machines and improved methods for jobs heretofore done on a handwork basis. Paradoxical as it may seem, the greatest security for labor occurs in those industries where management is most successful in using less labor per unit of output.

THIS RELATES TO:

- 1—Challenging competition
- 2—Holding to high service standards
- 3—Increasing internal strength
- 4—Getting a higher level of earnings
- 5—Improving tools and methods
- 6—Seeking a friendlier environment

If a railroad makes its goal the producing of low-cost transportation—by substituting machines for labor wherever possible—the chances are, in the long run, that jobs on that particular railroad will become pretty dependable. But if making or continuing unnecessary jobs is tolerated—particularly in a period of high and rising wages—then the company following that course may incur costs so high that it will find it hard to stay in business.

“Making work,” by artificial restrictions, may be helpful to a few employees for a while. But, over a term of years, “making work” is just about the surest way there is of killing work and destroying jobs.

The railroads will be strong—and thus have a promising future to offer to employees—to the degree to which they are successful in increasing the number of ton-miles and passenger-miles they can produce and sell, per employee and per dollar spent for wages.

Spotlight Low Performance

In some phases of railroad work, the effort to keep labor costs down while wages rise has been more successful than in others. The only long-run security for employment on the railroads lies in seeking out and correcting (by mechanization or better organization) the many situations where increased production per employee does not match, or more than match, the increased wages now being paid.

Such changes always involve shifts in occupation or location—which are never pleasant. There are many things management can do to make these changes relatively painless (e.g. helping to locate displaced employees in other jobs). But changes requiring job shifts on a major scale usually cannot be accomplished—without a lot of unprofitable controversy—unless a good deal of patient “selling” is done.

**MORE CAR MILEAGE THROUGH LONGER
SERVICE LIFE WITH GREATER SAFETY...**



A. A. R. Type H
Tightlock Coupler H-80



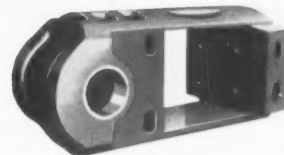
Retainer Y-11-B



Radial
Connection Seat
Y-26



Yoke Pin
Y-13



Yoke Y-65—Standard
Pocket for Twin Cushion
Draft Gear Application



Shank Pin
Y-10

Radial
Connection
Y-25-A



Yoke Y-50 Standard
Pocket for Conventional
Draft Gear Application

Symington-Gould **TYPE H
TIGHTLOCK COUPLERS**

CARS EQUIPPED WITH SYMINGTON-GOULD TYPE H TIGHTLOCK COUPLERS

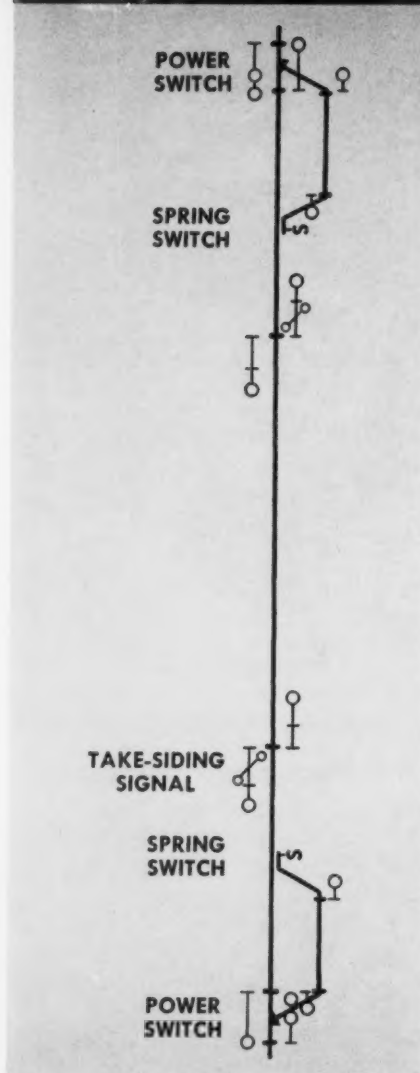
intercouple with existing standard couplers with reduced contour slack. These couplers insure positive engagement when coupling at slow speeds. Eliminate slack in coupler contour as

well as noise resulting from such slack. With Symington-Gould Type H Tightlock Couplers fatigue failures are reduced and service life is extended.

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you can tailor GRS cTc to suit your traffic

Where traffic is light you can install centralized traffic control with a very modest investment. Such an investment can give you just as good percent return as heavy-traffic cTc.

For example, each siding may be equipped with a power switch and controlled signals at one end and a spring switch at the other end. The cost? Often less than conventional automatic block signaling.

GRS cTc directs trains by signal indication only. You save train time, increase track capacity and improve safety of train operation. Start your program now by asking your GRS district office for a study and estimate.

Since 1951, the Burlington has installed over 400 miles of simplified GRS cTc like that shown here. In this arrangement, a controlled signal on the main is included at the spring-switch end. Trains normally take sidings over power-operated switches. But when advantageous, they can be directed onto sidings over hand-reversed switches.

2884



GENERAL RAILWAY SIGNAL CO.

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